

Is SDR Creation Inflationary?

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1. Giving greater prominence to SDRs in international reserves would entail allocating them more frequently in significant amounts. The question has properly been raised whether such issuance would be inflationary for the world economy. This short paper addresses that question. It explores five different “scenarios” that describe how recipient countries and the leading central banks—most notably the U.S. Federal Reserve (FRB) and the EU’s European Central Bank (ECB)—would respond to those allocations. It concludes that SDR issuance would be inflationary for the world economy under two of the scenarios, but not under the remaining three scenarios, which include the most likely ones.
2. Recall that under existing arrangements SDRs are issued by the International Monetary Fund (IMF) to members that are participants in the SDR Department (all members of the IMF at present) , in proportion to each country’s quota at the IMF, to satisfy the world’s long-term needs for additional reserve assets. (Under Article VIII.7 of the amended Articles of Agreement, they are to be made “the principal reserve asset in the international monetary system”). They can be exchanged among participants and between them and the IMF and selected other holders, in particular international financial institutions such as the World Bank and the Bank for International Settlements. They cannot be held by private parties. Thus to be inflationary they must increase world aggregate demand by stimulating the creation of domestic credit greater than would have taken place in their absence.
3. The mechanics of SDR creation are relevant to their potential to facilitate inflation. SDRs are created by a Fund decision and credited to member countries in proportion to each country’s quota at the IMF. The allocation per se has no monetary effect, simply providing participants’ monetary authorities (usually ministries of finance or central banks depending on the domestic arrangements) with an additional contingent claim on SDR Department participants—contingent, since use of SDRs under the designation mechanism requires a balance of payments or reserve position need (Article XIX.3). Such creation does not by itself create demand for goods and services. That will occur, for example, if the ministry of finance “sells” its SDRs to the national central bank (which are often subordinate to finance ministries) for domestic currency, and then spends the proceeds, a possibility discussed below.
4. A country uses its SDRs by exchanging them with another holder for a “freely usable currency”. In practice this means overwhelmingly U.S. dollars or euros, although other currencies may be used, and the list may grow in the future, as more currencies become more widely used and traded internationally. If dollars or euros are provided by countries other than the United States or a member of the Eurozone, there will be no monetary effect; these foreign exchange reserves are simply transferred from one country to another. If the United States is requested to provide the dollars, there is in the first instance no credit creation by the implementing agency, the Treasury’s Exchange Stabilization Fund (ESF).

Only if the ESF lacks sufficient dollars will it “sell” the SDRs to the central bank in exchange for Federal Reserve credit, thus increasing the money supply in the first instance (see the annex). If a Eurozone member is requested to provide currency, it may do so out of its extensive reserves of U.S. dollars, in which case there is no credit creation. If however it provides euros, credit is created within the euro zone. In this case the European Central Bank automatically sterilizes the creation if it exceeds that desired by the ECB (see the annex).

5. It is also important to keep magnitudes in mind. The total money supply (M2) of the world, converted into U.S. dollars at market exchange rates, amounted at the end of 2009 to approximately \$45 trillion. Thus each \$100 billion allocation of SDRs, if converted entirely into domestic currencies, would increase the world money supply by 0.22 percent. Two hundred billion dollars (roughly 133 billion SDRs) would be twice that. The U.S. share of a \$100 billion allocation would be \$17 billion, which would be the equivalent of 0.2 percent of the U.S. money supply (M2) at the end of 2009 (1.0 percent of M1). If the SDRs were converted into bank reserves instead of currency, they would allow multiple expansion of credit through bank loans. In the United States this would allow a roughly ten-fold expansion in bank loans, assuming the commercial banks were fully lent up, or an increase of 2 percent of M2. This compares with a normal annual increase (from 1997 to 2007) of 6.4 percent a year.

6. We do not know exactly how governments would respond to regular and significant allocations of SDRs. And of course governments very likely would respond in different ways. For example, the United States, Canada, Japan, and the countries of western Europe, joined today by China, would likely not respond at all to such allocations, since for many years the level of international reserves has not significantly influenced the macroeconomic policies of these countries. Additional reserves in the form of SDRs are not necessary to induce these countries to change their monetary policies, nor are they sufficient to induce such change. These countries together account for 62 percent of IMF quotas, and hence would receive that percentage of any new SDR allocation.

7. During the six months following the general and special SDR allocation in August 2009, an exceptionally difficult time for the world economy, about SDR 3.1 (roughly \$4.6 billion), under 2 percent of the total allocation, were sold for usable currencies, 97 percent of which were dollars and euros. Thirteen countries sold nearly their total allocation; three additional countries made partial sales. Most of the sales were to countries other than the United States and members of the Eurozone, thus resulting in no monetary expansion outside the countries that made the sales. It is unclear whether this pattern would continue to obtain if SDRs were issued on a regular basis.

8. Here we look at five different scenarios of possible response. These scenarios are framed against an implicit baseline involving a growing world economy that includes a desire by many countries to add to their foreign exchange reserves over time.

- 1) All countries simply hold the SDRs they have been allocated, or use them to repay obligations to the IMF. Their economic behavior is not influenced in any way in normal times. Under this scenario, there would be no inflationary impact arising from public action. A subcase would involve a response by private agents, in view of the now higher level of international reserves held by their governments, by lowering the precautionary money balances they hold, thus increasing the velocity of a given domestic money supply. This unlikely event could have some inflationary impetus. It is unlikely because private precautionary balances are presumably held in domestic currency against domestic contingencies that might impact each firm or household, and perception of these contingencies are not likely to be influenced by higher official holdings of international reserves. They might however reduce their holdings of foreign balances, mainly in dollars or euros, if they deemed they did not have to hedge against an exhaustion of official reserves, and the inflationary impetus would then depend on the behavior of the FRB and the ECB, taken up below.
- 2) At the other extreme, all recipients might increase domestic credit by the full amount of the SDR allocation—or, in a moment of euphoric enthusiasm, by even more. As noted above, an SDR allocation worth \$100 billion would then increase the world money supply by 0.2 percent or perhaps even two percent, and this indeed could be inflationary to the extent that this increase resulted in higher expenditures on goods and services, or even in the absence of higher expenditures induced price increases through anticipation of higher expenditures. This scenario of course presumes that inflation targeting by central banks is weak throughout the world, or that it is abandoned in the presence of SDR allocations.
- 3) A third scenario assumes that countries substitute SDR allocations for dollars or other foreign currencies that they otherwise would have added to their reserves. In other words, this scenario assumes that countries have a desired level of reserves (which presumably grows over time) and that in the absence of an SDR allocation they would have built their foreign exchange reserves by increasing their liabilities to foreigners (e.g. by borrowing abroad or encouraging inward foreign investment) or they would have run a current account surplus with the objective of adding to their reserves. An SDR allocation would substitute for these actions. It would therefore permit greater credit expansion at home, more domestic investment, and a decline in

the current account relative to what it would otherwise have been. Integrating over the world, this in turn would imply larger export demand in other countries, especially (ultimately) in Europe and the United States, far the largest economic units. In addition, however, it would imply reduced demand around the world for dollars, euros, and possibly other reserve currencies in those countries that have managed their exchange rates to acquire more reserves. The FRB and the ECB would respond by reducing the supply of dollars and euros to match the reduced demand for them. They would respond further to compensate for any inflationary impact of increased exports from their jurisdictions, since both central banks formally or informally have inflation targets. The net result would be increased inflationary pressures in many countries, mitigated by increased imports, and increased inflationary pressures in the two largest economic units, neutralized by appropriate adjustments in monetary policy. These adjustments will not be difficult or costly so long as the size of SDR use does not exceed normal desired increases in the money supply in those economies. The prices of nontradable goods and services in the SDR-spending country may rise. It could appreciate its currency, which would reduce domestic prices of tradables in that country, offsetting the additional price pressures on nontradables. Otherwise it would experience some inflation, the mechanism by which its currency would appreciate in real terms. (Note that international adjustment generally requires that some national price levels increase or decrease relative to others. Therefore international adjustment cannot take place without inflation in some countries and/or deflation in others. If a country is to reduce its current account surplus because its reserve needs are now satisfied by an SDR allocation, it needs, *ceteris paribus*, either to appreciate its currency or to allow price increases for nontradables.)

- 4) A variant of (3) is that some countries would use their SDR allocations to increase domestic expenditure (investment or government consumption) by central bank issuance of domestic currency to the government against the allocation of SDRs, with the result of increased domestic spending and ultimately of imports, without reducing their holdings of foreign currencies. This would raise export demand in other countries and again, integrating through the world economy, exports of American and European (and Japanese and Chinese) products would rise. Again, to the extent this increase in aggregate demand in the United States and Europe produced inflationary pressures, the FRB and ECB (and the Bank of England) would take appropriate monetary actions to keep inflation within the targeted ranges. Production of nontradable goods and services would be squeezed to offset any net increase in export demand. There would be no additional inflation in the

core of the world economy, except insofar as prices of raw materials were raised and passed into consumer prices.

- 5) A final scenario mimics (3) or (4) except that the FRB and/or the ECB fails to respond to increasing inflationary pressures. They may do this for good reason because, as in 2009, the world economy is in recession and world aggregate demand is weak, such that expansionary demand by SDR-receiving countries does not in fact produce price increases beyond those in raw materials whose prices were depressed by the recession. In such periods, additional worldwide demand is welcome. I rule out as extremely improbable the possibility that the FRB or the ECB lose their inflation-fighting zeal because the United States and the European countries have been allocated SDRs, even in significant amounts. The dollar, the euro, and the British pound are floating currencies, and the monetary policies of their central banks are not likely to be influenced by additions to the international reserves of their governments.
9. I conclude that the most likely scenarios by far are some combination of (3) and (4), in which the possible global inflationary impact of some increased import demand by developing countries following an allocation of SDRs will be fully neutralized by the monetary policies of the Federal Reserve, the European Central Bank, and other inflation-targeting central banks.

Annex on Mechanics of SDR Absorption

1. The allocation of SDRs to the United States and to members of the Eurozone does not affect monetary policy directly at all. The potential effect comes when another country wants dollars or euros in exchange for its SDRs, mediated by the International Monetary Fund.
2. In the case of the United States, the SDRs are presented to the U.S. Treasury's Exchange Stabilization Fund, which if possible dispenses the requested dollars from its own balances, drawing on bank accounts. If its dollar balances are inadequate, it can sell the SDRs to the Federal Reserve, which in the process creates Federal Reserve credit, i.e. increases the money supply. This credit can and normally would be sterilized (offset) through the Fed's normal open market operations, e.g. in this case by selling an equivalent amount of its holdings of U.S. Treasury bills.
3. In the case of members of the Eurozone, the SDRs are presented to the national central banks (e.g. of Germany or France) in exchange for usable currencies. These transactions must be reported to the ECB. If euros are provided, the ECB would allow for that issuance by adjusting its frequent repurchase operations.