An SDR Based Reserve System

Peter Kenen, *Princeton University*

An SDR Based Reserve System

Peter Kenen

Abstract

This paper proposes the creation of a substitution account within the IMF into which official holders of dollar reserves could deposit a portion of those reserves in exchange for Special Drawing Rights (SDRs), the Fund's own quasi currency. It argues that this innovation would greatly improve the functioning and stability of the international monetary system by precluding reserve-currency diversification by official holders of dollar reserves.

My predecessor at Princeton University, Fritz Machlup, was famous for demanding precision in the use of language and for drawing distinctions between terms that are often treated as synonyms when, in fact, they are not. Let me do that now.

The terms 'reserve currency' and 'reserve asset' are often used interchangeably, yet they are not synonyms. Reserve currencies such as the dollar and euro are reserve assets, but gold was once a reserve asset without being a reserve currency, and the same can be said of the Special Drawing Rights (SDRs) issued by the International Monetary Fund. They are commonly and properly treated as reserve assets although they are not currency. You cannot carry SDRs in your wallet, even if you are a central bank governor, nor can you use them to buy lunch or pay taxes.

More to the point, a government or central bank cannot use SDRs for intervention in the foreign-exchange market to stabilize the value of its currency in terms of other currencies – one of the principal purposes for which governments and central banks hold reserve currencies such as the dollar and the euro. It must hold and use another country's currency for that purpose.

Nevertheless, the SDR could still come to serve as the main reserve asset in the international monetary system, the purpose for which it was created. A government or central bank holding SDRs can transfer them to another government in exchange for the currency issued by that government, then use that currency for intervention in the foreign-exchange market or to redeem foreign-currency debt.

In another paper (Kenen 2010), I have described at length the way in which the SDR could be made to serve these purposes. That paper revives a proposal made three decades ago for replacing reserve currencies, such as the dollar and euro, with SDR-denominated claims, which official holders could then use to acquire reserve currencies when they needed those currencies to intervene in the foreign-exchange market, repay sovereign debt denominated in a foreign currency, or other purposes. This paper summarizes the argument of that paper and elaborates on some of the points made there.

Starting with a Substitution Account

The original proposal envisaged the creation of a so-called *substitution account* housed in and administered by the International Monetary Fund (IMF), into which central banks and governments holding US dollars could deposit some of their dollar reserves in exchange for claims denominated in SDRs. The proposal was the subject of serious discussions among the major industrial countries in 1979-80, but the discussions deadlocked when those countries' governments could not agree on the way to maintain the dollar value of the SDR-denominated claims.

The United States declined to assume full responsibility for that obligation, and no other arrangement was acceptable to the other governments involved in the negotiations. Furthermore, the dollar had begun to appreciate against other major currencies, allaying concerns about its future value in terms of those other currencies.[1]

Interest in the subject then subsided, and it was not revived until Zhou Xiaochuan, Governor of the People's Bank of China, suggested in a much-cited speech that the idea be considered anew (Zhou 2009).[2] The reason for his interest is obvious; China holds some $2.5 trillion of foreign-exchange reserves, largely in US dollars, and it would suffer large losses if the dollar were to depreciate sharply against other major currencies. Yet China cannot readily diversify its reserve-currency holdings without depressing the value of the dollar in terms of other major currencies and thus suffering those very same losses on its remaining dollar reserves.

This paper, however, goes further than Governor Zhou's suggestion. It proposes a reserve regime based *mainly* on the SDR. Governments and central banks would deposit a large proportion of their reserve-currency holdings with the IMF in exchange for SDRs. They could then transfer those SDRs to other members of the IMF in exchange for those other members' national currencies when they needed those currencies for intervention in the foreign-exchange market, for debt repayment, or for other purposes. The stock of reserve assets held in this form could grow over time, not only by way of additional deposits but also and primarily by regular emissions of new SDRs by the IMF itself.

If, for example, Japan had deposited the bulk of its foreign-exchange reserves with the IMF in exchange for SDRs and decided thereafter to intervene in the foreign-exchange market to prevent the yen from depreciating against other currencies, it would transfer the requisite quantity of SDRs to, say, the United States in exchange for US dollars and then use the dollars to intervene on behalf of the yen. It would not be required to reconstitute its SDR holdings thereafter, although it would surely want to do that once its currency had strengthened and it had been able to acquire US dollars or other currencies by reverse intervention in the foreign-exchange market.[3]

---

[1] On the original round of negotiations on a substitution account, see Boughton (2001); during those negotiations, I ran several simulations designed to assess the potential cost of a substitution account from the standpoint of the United States; see Kenen (1980).

[2] See, however, Bergsten (1997) and (2007), who sought to revive the idea even before Governor Zhou's suggestion.

[3] Note that it would not have to acquire dollars for this purpose, even though it had drawn dollars for its initial intervention; it could acquire the currency of any other country holding SDRs in the Substitution Account and use it to acquire SDRs from that country. (It might be necessary, however, to adopt a rule barring a government from presenting a country's national currency to acquire SDRs if that other country's holdings had fallen below some predetermined threshold

As the value of the SDR is defined by a basket of key currencies (at present, the dollar, euro, pound, and yen), participating governments would have less cause to fear a depreciation of the dollar *vis-à-vis* other major currencies. Furthermore, their SDR claims would be fully transferrable to other members of the IMF in exchange for those other countries' currencies, thus giving each participating government access to the national currencies it chose to use for intervention on the foreign-exchange markets and for other purposes. The IMF would allocate additional SDRs to its members on a regular basis, assuring each participating country of gradual growth in its reserves. Finally, the present provision in the Articles of Agreement of the IMF requiring a participating government to reconstitute its SDR holdings after it had run them down should be rescinded, so that a participant that had drawn down its SDR holdings would not be compelled to rebuild them in a predetermined manner.[4] Otherwise, SDR-denominated reserves might be insufficiently attractive relative to existing reserve assets.

Each participating government would be solely responsible for managing prudently its SDR holdings. Each participant, moreover, would be able to use its SDRs to purchase other countries currencies with the consent of those countries and then to repay those currencies on terms mutually agreed between the governments involved.[5] Provision might also be made for members of the IMF to borrow SDRs from other members on terms mutually agreed by those members and then use those SDRs to purchase the national currency of the lending country. A government could thus acquire the currencies it needed for intervention on the foreign-exchange market and other purposes.

In short, the SDR would become a full-fledged reserve asset without becoming a full-fledged reserve currency available directly for intervention in the foreign-exchange market or for other purposes.

---

defined, say, in terms of its initial SDR holdings plus the sum of its subsequent allocations of SDRs. (This is perhaps the place to note that the scheme outlined here does not contemplate a distinction between SDRs provided *via* periodic allocations by the IMF and SDRs provided as substitutes for reserve currencies previously held by member countries. The two sorts of SDRs would differ in origin but not in any other characteristic.)

[4] This and other features of the regime described here would require the rewriting of several provisions in the Articles of Agreement of the IMF, most notably those in Article XIX pertaining to the use of SDRs. If the SDR were to become the principal reserve asset in the international monetary system, the existing "requirement of need" would have to be modified substantially. But the provisions regarding "designation" might have to remain in force and perhaps be broadened so that a government holding mainly SDRs as reserve assets would have a wide choice of partner to which it could transfer SDRs when it required a national currency for intervention, debt repayment, or some other obligation. (The reconstitution requirement has been suspended for nearly three decades, but it should be rescinded permanently.)

[5] A rule might have to be adopted, however, limiting the right of any participating country to refuse a request by another participant to purchase the first country's currency with SDRs.

Maintaining the Financial Integrity of an SDR Reserve Regime

How might such a reserve regime evolve over time? Table 1 answers that question by tracing the evolution of one such regime over the course of three decades.[6] It assumes that the new regime was introduced at the start of 1980 – which happens to be the year when the original proposal for a substitution account failed of adoption. Governments holding $500 billion of US dollar reserves are assumed to have deposited them in an account with the IMF, where they earned interest thereafter at the US Treasury bill rate, and the depositors received in exchange SDR-denominated claims that paid interest at the SDR interest rate. In that same year and every year thereafter, the United States, the depositors, or the two together would have paid an annual fee to the IMF equal in total to one per cent of the number of dollars in the Substitution Account, and the proceeds would have been deposited in a Substitution Account Reserve Fund (SARF) where they likewise earned interest at the US Treasury bill rate.

Whenever the number of dollars in the Substitution Account, including accumulated interest, fell short of the dollar value of the SDR claims on the Account, dollars previously deposited in the SARF would have been used to top up the dollar holdings of the Substitution Account in the manner illustrated in Table 1. If the number of dollars held by the SARF were insufficient for this purpose, as actually happens in Table 1, the SARF would be entitled to borrow dollars from the IMF itself, repaying them in due course with the proceeds of the annual fees paid thereafter to the SARF.[7]

A slight smaller annual fee would have sufficed to maintain the financial integrity of the SARF over the 29-year period covered by Table 1, but the balance available in the SARF at the end of 2008 would have been much lower and, perhaps, too small to maintain the financial integrity of the Substitution Account in the early years of the 21st Century, even with recourse to additional temporary borrowing from the IMF itself.

---

[6] The paper cited above (Kenen 2010) did not include this table in its present form bur rather proposed other ways to maintain the solvency of the substitution account. On reflection, I have come to believe that the regime described by this table is the most sensible way to achieve that objective, although it may not be easy to reach agreement on the division of the annual fee between the issuers of the 'old' reserve currencies and the other participants in the Substitution Account. The cumulative cost of that annual fee, including interest, would be substantial.

[7] There can, of course, be no guarantee that the SARF would be able to repay the IMF in a timely way. If it were unable to do so, provision might be made initially for the funding of the SARF's debt, with eventual repayment guaranteed by the United States.

Table 1 Solvency of a Substitution Account Maintained by a Substitution Account Reserve Fund (SARF)

End of Year	US$ per SDR	SDR Interest Rate	US Interest Rate	US Interest Payment	SDR Amount in SA	Dollar Value of SDR Amt	Annual Payment to SARF	Sum of Payments to SARF*	Net Assets of SARF**	Deficiency Payment by SARF
1980	1.30	9.1	11.2	0.0	384.6	500.0	5.0	5.0	5.0	0.0
1981	1.18	12.7	14.4	72.0	433.5	511.5	5.7	11.4	11.4	0.0
1982	1.10	11.2	10.8	61.8	482.0	530.2	6.3	19.0	19.0	0.0
1983	1.06	8.6	8.9	56.4	523.5	554.9	6.9	27.6	27.6	0.0
1984	1.02	8.9	9.8	67.6	570.1	581.5	7.6	37.9	37.9	0.0
1985	1.02	7.8	7.7	58.4	614.5	626.8	8.2	49.0	49.0	0.0
1986	1.18	6.4	6.2	50.6	653.8	771.5	8.7	60.7	60.7	0.0
1987	1.30	5.9	6.0	52.0	692.4	900.1	9.2	73.5	73.5	0.0
1988	1.35	6.3	6.9	63.4	736.0	993.7	9.9	88.5	77.0	11.5
1989	1.28	8.3	8.4	83.5	797.1	1020.3	10.8	106.7	94.3	0.0
1990	1.35	9.1	7.7	82.9	869.7	1174.1	11.7	126.7	99.2	14.0
1991	1.37	7.7	5.5	64.6	936.6	1283.2	12.8	146.5	73.0	44.5
1992	1.41	6.3	3.5	44.9	995.6	1403.9	14.0	165.6	13.8	75.8
1993	1.39	4.6	3.1	43.5	1041.4	1447.6	14.5	185.3	28.5	0.2
1994	1.43	4.3	4.4	63.7	1086.2	1553.3	15.5	208.9	3.3	42.0
1995	1.52	4.6	5.7	88.5	1136.2	1727.0	17.3	238.1	-64.4	85.2
1996	1.45	3.9	5.1	88.1	1180.5	1711.7	18.2	268.4	-49.5	0.0
1997	1.37	4.1	5.2	94.4	1228.9	1683.6	19.1	301.5	-33.0	0.0
1998	1.35	4.1	4.9	93.6	1279.3	1727.0	20.0	336.3	-14.6	0.0
1999	1.37	3.5	4.8	96.1	1324.1	1814.0	21.0	373.4	5.7	0.0
2000	1.32	4.4	6.0	126.0	1382.3	1824.7	22.3	418.1	28.3	0.0
2001	1.27	3.4	3.5	77.9	1429.3	1815.2	23.0	455.7	52.3	0.0
2002	1.30	2.2	1.6	36.8	1460.8	1899.0	23.4	486.4	76.5	0.0
2003	1.41	1.7	1.0	23.4	1485.6	2094.7	23.6	514.9	100.9	0.0
2004	1.47	1.8	1.4	33.1	1512.3	2223.1	24.0	546.1	126.3	0.0
2005	1.47	2.6	3.2	76.7	1551.7	2280.9	24.7	588.3	155.1	0.0
2006	1.47	3.7	4.9	121.2	1609.1	2365.3	25.9	643.0	188.6	0.0
2007	1.54	4.1	4.5	116.7	1675.0	2579.6	27.1	699.1	224.2	0.0
2008	1.59	2.6	1.4	38.0	1718.6	2732.6	27.5	736.4	254.8	0.0

One per cent annual fee paid to SARF by the United States, by the Depositors, or by Both. (Billions of US Dollars or SDRs)

*Includes interest paid by United States on the accumulated assets of SARF when previous value is positive; includes interest paid by SARF to the IMF when previous net assets are negative. In this and the next table, dollar and SDR interest payments in year t are based on the dollar and SDR amounts in the Account at the end of year t-1 and the interest rate prevailing in year t.

**Includes accumulated interest on gross payments to SARF.

Table 2 Solvency of a Substitution Account Maintained by the United States with Rebates when Account is in Surplus (Billions of US Dollars or SDRs)

End of Year	US$ per SDR	SDR Interest Rate	US Interest Rate	US Interest Payment	Dollar Amount in SA	Adjusted Dollar Amount*	SDR Amount in SA	Dollar Value of SDR Amt	Surplus or Deficit in SA	Rebate to US**	Deficiency Payment by US	Total Cost to US
1980	1.299	9.06	11.24	0.0	500.0	500.0	384.9	500.0	0.0	0.0	0.0	0.0
1981	1.176	12.66	14.35	71.8	571.8	540.9	433.6	510.0	61.8	30.9	0.0	40.9
1982	1.099	11.17	10.77	61.6	633.3	581.6	482.1	529.8	103.5	51.8	0.0	50.7
1983	1.064	8.60	8.87	56.2	689.5	623.3	523.5	557.0	132.5	66.2	0.0	40.6
1984	1.021	8.92	9.81	67.6	757.1	669.7	570.2	582.2	174.9	87.5	0.0	20.8
1985	1.021	7.81	7.73	58.5	815.7	721.7	614.8	627.7	188.0	94.0	0.0	-14.7
1986	1.176	6.39	6.15	50.2	865.8	817.5	654.1	769.2	96.7	48.3	0.0	-12.8
1987	1.299	5.87	5.95	51.5	917.4	908.4	692.5	899.5	17.9	8.9	0.0	29.7
1988	1.351	6.25	6.88	63.1	994.0	994.0	735.7	994.0	-13.5	0.0	13.5	106.4
1989	1.282	8.27	8.39	83.4	1077.4	1049.3	796.6	1021.2	56.2	28.1	0.0	161.7
1990	1.351	9.09	7.74	83.4	1174.0	1174.0	869.0	1174.0	-13.3	0.0	13.3	258.3
1991	1.370	7.72	5.53	64.9	1282.4	1282.4	936.1	1282.4	-43.5	0.0	43.5	366.7
1992	1.408	6.26	3.51	45.0	1400.5	1400.5	994.7	1400.5	-73.1	0.0	73.1	484.8
1993	1.389	4.64	3.06	42.9	1445.7	1445.7	1040.8	1445.7	-2.4	0.0	2.4	530.0
1994	1.429	4.29	4.35	62.9	1551.1	1551.1	1085.5	1551.1	-42.6	0.0	42.6	635.4
1995	1.515	4.58	5.65	87.6	1719.8	1719.8	1135.2	1719.8	-81.0	0.0	81.0	804.1
1996	1.449	3.90	5.14	88.4	1808.2	1758.6	1179.5	1709.0	99.2	49.6	0.0	842.9
1997	1.370	4.07	5.20	94.0	1902.2	1791.9	1227.5	1681.6	220.6	110.3	0.0	826.6
1998	1.351	4.11	4.90	93.2	1995.4	1860.9	1277.9	1726.5	269.0	134.5	0.0	785.4
1999	1.370	3.48	4.77	95.2	2090.6	1951.1	1322.4	1811.7	279.0	139.5	0.0	741.1
2000	1.316	4.44	6.00	125.4	2216.1	2016.8	1381.1	1817.5	398.5	199.3	0.0	667.2
2001	1.266	3.43	3.48	77.1	2293.2	2050.7	1428.4	1808.3	484.9	242.4	0.0	501.9
2002	1.299	2.24	1.63	37.4	2330.6	2113.8	1460.4	1897.0	433.5	216.8	0.0	322.5
2003	1.408	1.65	1.02	23.8	2354.3	2222.2	1484.5	2090.1	264.2	132.1	0.0	214.2
2004	1.471	1.84	1.39	32.7	2387.1	2305.4	1511.7	2223.7	163.3	81.7	0.0	165.2
2005	1.471	2.60	3.21	76.6	2463.7	2372.6	1551.1	2281.6	182.1	91.0	0.0	150.8
2006	1.471	3.69	4.85	119.5	2583.2	2474.5	1608.3	2365.9	217.3	108.6	0.0	161.7
2007	1.538	4.05	4.45	115.0	2698.1	2636.0	1673.5	2573.8	124.3	62.2	0.0	214.5
2008	1.587	2.56	1.37	37.0	2735.1	2729.4	1716.3	2723.8	11.3	5.6	0.0	245.8

*Dollar amount in Substitution Account less rebate (if any) to the United States.

**One-half of the surplus (if any) in the Substitution Account defined as the (positive) difference between the dollars in the Account and the dollar value of the SDRs in the Account.

There are, of course, several other ways in which a Substitution Account might be structured and its solvency maintained. Table 2 illustrates one of them.[8] In this example, the United States is made solely responsible for the solvency of the Account, but the burden involved is offset in part by rebates to the United States. The United States must make the deficiency payments required whenever the dollar holdings of the Account fall below the dollar value of the SDR claims on the Account. These payments, shown in the penultimate column, of Table 2, are identical to the corresponding payments made by the SARF in Table1. The cost of these payments, however, is offset in part by rebates paid to the United States whenever the number of dollars in the Account exceeds the dollar value of the SDRs in the Account, and they are equal to one-half of the 'surplus' in the account, defined as the difference, when positive, between the number of dollars in the Account and the dollar value of the SDR claims on the Account.

It is impossible to compare directly the costs to the United States of the regimes illustrated in Tables 1 and 2 without making an additional assumption regarding the incidence of the annual fee paid to the SARF in Table 1. If that fee were paid entirely by the United States, however, the sum of the annual fees *plus* accumulated interest on them would substantially exceed the total cost to the United States of the regime illustrated in Table 2. If, then, responsibility for maintaining the solvency of the Substitution Account were deemed to reside wholly with the United States, the regime described by Table 2 would be superior from its standpoint. Yet a substitution account of any sort should be regarded as a public good, and the costs of maintaining its financial integrity should not be borne exclusively by the United States, even though the United States has benefitted both narrowly and from being the main provider of reserve assets for the better part of a century.

Initiating an SDR Reserve Regime

How might an SDR-based reserve system of sort illustrated in Tables 1 and 2 be brought into being? It could be introduced gradually by issuing new SDRs annually, but that might take a long time, and it would do nothing to remove reserve currencies such as the dollar and euro from the core of the international monetary system. Alternatively, the IMF could create a large quantity of new SDRs and use them to purchase reserve currencies such as the dollar and euro from the governments and central banks that hold them now and wished to

---

[8]This example adapts a suggestion made by C. Fred Bergsten in correspondence with the author pertaining to a related paper. Simulations based on his proposal in its original form suggested that it could impose high costs on the United States, and the adaptations incorporated in Table 2 are aimed at reducing that costwithout diminishing the attractiveness of the arrangement.

exchange some or all of them for SDRs. The Fund would then hold those currencies indefinitely; it would presumably invest them in a special, nonmarketable class of interest-bearing securities issued by the governments of the countries that had issued the currencies themselves. The interest payments made by issuing countries would not constitute an additional cost to those countries, because they presently pay interest to the governments and central banks that now hold as reserve assets interest-bearing securities denominated in those countries' currencies. The interest earned by the IMF on its holdings of dollars, euros and other reserve currencies would 'back' the interest payments made by the IMF on the newly created SDRs.[9]

The transfer of existing reserve currencies to the IMF could take place once for all or at predetermined intervals. A large once-for-all transfer of dollars, euros, and other reserve currencies to the IMF would be preferable, because it would signal the irreversible nature of the change in the global reserve regime. But a more gradual process might be preferred, not only by the issuers of the 'old' reserve currencies, but also by the holders of those currencies, as they would want to be sure that the new regime was working well before they surrendered the bulk of their reserve-currency holdings. No member of the IMF, however, should be *required* to surrender any part of its reserve-currency holdings in exchange for SDRs.

Another change in the monetary system should perhaps accompany the reform of the reserve regime described above. Heretofore, the United States has rarely intervened on a large scale to influence the foreign-currency value of the dollar, and it does not hold a large stock of foreign-currency reserves for that purpose. Although the transformation of the reserve regime proposed above would not require the United States to alter its quasi-passive stance, provision might be made for the United States to acquire a sizeable stock of SDRs for the conduct of future intervention should it wish to intervene. Just as other members of the Fund would transfer some of their existing dollar reserves to the IMF in exchange for SDRs, the United States might likewise be enabled to acquire a sizeable stock of SDR claims on the Substitution Account against a deposit of US dollars with the IMF.

One more safeguard may be needed. On rare occasions, the Fund has suspended the voting rights of a member country for failure to fulfill its obligations under the Fund's Articles of Agreement. It might therefore be made

---

[9]In the case of the euro-zone countries, there would need to be an agreement on the apportionment of the interest payments on the euros transferred to the IMF. It could perhaps be based on the nationality of the euro-denominated securities deposited initially with the IMF in exchange for SDRs, but the IMF might not choose to hold euro-denominated securities identical in national origin to those deposited originally.

clear from the outset that no IMF member will be barred from using its SDR holdings to acquire another member's currency *via* the Substitution Account.

At some point, of course, allocated SDRs and those created *via* the Substitution Account should be consolidated, the maintenance-of-value regime associated with the latter should be terminated, and the transferability of SDRs created *via* the Substitution Account should extended to all members of the IMF, not confined to those that had deposited currency reserves with the Substitution Account. At that point, the SDR would indeed become the main reserve asset in the international monetary system. Although the simulations displayed in Tables 1 and 2 covered almost three decades, the further steps described in this paragraph should surely be taken after a much shorter period, at which point the SDR would indeed become the principal reserve asset in the international monetary system.

Governing the Growth Rate of Global Reserves

If the SDR is to become the principal reserve asset in the international monetary system, at what rate should the International Monetary Fund cause the stock of SDRs to grow *via* subsequent allocations? The appropriate growth rate of reserves should surely be based on a nominal, not real, index, because reserves are needed mainly to deal with fluctuations in the balance between nominal inflows and outflows in countries' balance-of-payments accounts.

This suggests the use of a growth rate reflecting the growth of all international transactions, not merely the growth of merchandise trade. But an index based on the growth of nominal trade flows *plus* gross capital flows would be extremely hard to compile, as so many capital flows are recorded on a net basis rather than gross basis, and capital flows are typically subject to large year-to-year fluctuations. It may therefore be necessary to settle on an index of growth in nominal trade flows *plus* an arbitrary percentage allowance as a proxy for the influence of growth in capital flows on the demand for international reserves. It would, in any case, be wrong to choose a very low rate for the growth in reserves in an effort to constrain national policies, as that may merely to encourage the renewed accumulation of reserve currencies to relieve a perceived shortfall in the growth rate of global reserves.

Advantages of an SDR-based Reserve Regime

Why would the reserve regime described in this paper be superior to the existing regime?

First, the subsequent growth rate of global reserves would be chosen collectively by the membership of the IMF, not by erratic variations in the balance-of-payments positions of the United States, the Euro Area, or any other

issuer of a world-class currency. In other words, the supply of the main reserve asset would not depend, as it does now, on swings in the balance of payments of the United States, the Euro Area, or any other future issuer of a reserve currency. It would depend instead on the collective judgment of the international community, manifest in decisions concerning the frequency and size of SDR allocations. Consideration might also be given to making supplementary allocations of SDRs to low-income countries that have very small reserves.

Second, the present issuers of reserve currencies would themselves be protected from fluctuations in other governments' judgments concerning the balance-of-payments prospects of the issuing countries or, more generally, the quality of the issuing countries' economic policies. There could still be a 'run' on the dollar, the euro, or any other major currency should foreign holders of that currency come to question the quality of the issuer's national policies, but the size and disruptive character of any such 'run' could not be magnified by corresponding shifts in the currency composition of official reserves.

Third, the stability of the reserve-currency regime could not be impaired by the advent of new candidates for reserve-currency status. To be sure, the advent of the euro has not had any such effect; the currency composition of official reserves has changed rather gradually, insofar we can judge it from the data published by the International Monetary Fund. Those data are incomplete, however, because no government is required to report to the IMF the currency composition of its reserves. The size of the 'residual,' moreover, as well as its division between developed and developing countries, suggests that a small number of countries, including China, that have very large reserves but little explicit responsibility for the stability of the global monetary system, are among the countries that do not report to the IMF the currency composition of their reserves.

Finally, there is not now any reliable way to forestall or limit a large shift in the currency composition of official reserves that could have disruptive effects on the trading system as well as the international monetary system itself – a shift of the sort that might be triggered by a major economic or political crisis involving a reserve-currency country – and it would be hard, nigh impossible, to impose a limitation of that sort under crisis conditions. The creation of a substitution account would substantially reduce the risk, or at least the magnitude, of a disruptive shift in the currency composition of official reserves. It seems certain, moreover, that there will be a further decline in the relative economic and monetary importance of the United States, the main reserve-currency country.

Equally important, there can be no guarantee that the United States will always pursue sensible economic policies. No American, however proud of the global role that the United States has played since the Second World War, can claim with absolute confidence that the United States will always conduct its

affairs with adequate concern for the stability of the global economic and monetary system or that it will always see eye-to-eye with those other countries that are bound to exercise increasing influence on the stability of the system in the decades ahead.

The organization and functioning of foreign-exchange markets may, of course, sustain the dominance of the dollar in foreign-exchange trading for a long time to come. In most such markets, the national currency is traded mainly against the dollar, not against a whole array of other countries' currencies. The reason is simple. It is far easier for currency traders to monitor a single vector of exchange rates – the price of the dollar against a list of other currencies, including the currencies of the countries in which the traders reside – than monitor a whole matrix of bilateral exchange rates, and the relative simplicity of this information set fosters rapid arbitrage that keeps cross rates aligned. It is therefore quite likely that the dollar will remain for some time the dominant currency in foreign-exchange markets, accounting as it does now for some 90 per cent of worldwide currency trades. Yet the dominance of the dollar in those markets could not guarantee its primacy as a reserve asset if other countries' central banks and governments were to lose confidence in the economic policies of the United States.

The rise of the euro as a reserve currency has, of course, been gradual and orderly, but an outright loss of confidence in the dollar by some foreign governments and central banks could trigger a much less orderly transition to one or more new reserve currencies. The proposal advanced here should therefore be viewed as a safeguard against a disorderly process of reserve-currency diversification, as well as a way to achieve more stable growth in the stock of reserve assets.

Conclusion

The quality of international economic cooperation and the stability of the international monetary system should not continue to depend so heavily on the policies and currency of any single country, and the transformation of the reserve regime outlined in this note would surely produce a better-balanced monetary system. In the process, the IMF would become a truly monetary institution, not merely a source of medium-term credit for countries with balance-of-payments problems. It would nevertheless retain its present tasks, including the surveillance of its members' policies but, as indicated earlier, should not be empowered to discipline a member by limiting or blocking a member's access to its SDR holdings.

References

Bergsten, C. Fred, "How to Solve the Problem of the Dollar," *Financial Times*, December 11, 1997.

-------- "Objections Do Not Invalidate Substitution Account Benefits," *Financial Times*, December 28, 2007.

Boughton, James M., *Silent Revolution: The International Monetary Fund, 1979-1989.* Washington: International Monetary Fund, 2001.

Kenen, Peter B., "The Analytics of a Substitution Account," *Banca Nazionale del Lavoro Quarterly Review* 139, 1980; reprinted in P.B. Kenen, *Exchange Rates and the Monetary System*, Edward Elgar: Aldershot, 1994.

------- "Reforming the Global Reserve Regime: The Role of a Substitution Account," *International Finance,* Vol. 13, No. 1, 2010.

Zhou, Xiaochuan, "Reform of the International Monetary System," People's Bank of China, March 2009.