International Price Stability, Full Employment and Global Balances: The Case for a Commodity Reserve Currency

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Abstract

Despite globalization, liberalized trade and growing global income, billions of people are underemployed and condemned to life-long poverty. Over two thirds of the world’s poor reside in rural regions. Inequality in living standards between developed and developing regions remains a major challenge. Rising inequality has been tied to a declining terms of trade against commodities and towards manufactured goods. The recent increase in commodity prices has aided growth in developing countries, but it has also triggered renewed concern over inflation and access to key commodities. Standard responses to inflation are tighter monetary policy in the industrialized world, and devalued currencies with price controls in developing countries. Such policies will continue to aggravate global imbalances, and stymie long term investment in commodity production. Nicholas Kaldor in 1964 suggested a bold new international monetary system to equilibrate growth between agriculture and industry, and remove bottlenecks to industrialization. Specifically he proposed the creation of a ‘sound money’ international reserve backed by a basket of stored commodities, tying reserve liquidity to international world trade. His proposed commodity reserve currency would not only balance economic progress between regions, but also mitigate global imbalances. This paper argues that such an ambitious global macro proposal could be usefully studied to provide insights into current policy debates on the Millennium Development Goals, a new international monetary order, new global partnerships in resource security, and ways to stabilizing cost-push inflation.

JEL Codes: E12, E6, E5
Key Words: Kaldor, International Reserve Currency, Global Monetary System, Global Development

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1. Introduction

The most interesting and thought provoking studies are usually the most controversial, either for their methodologies or the uniqueness of their conclusions. Such works are significant because their authors have the courage to tackle a problem which others deem too difficult or too risky. While affiliated with the United Nations, Nicholas Kaldor was the primary draftsman of two bold international coordination policies. The first, in 1949, was the report for the UN Economic and Social Council, National and International Measures for Full Employment (NIFE). The second, in 1964, was The Case for an International Commodity Reserve Currency, submitted at the first meeting of the United Nations Conference on Trade and Development (UNCTAD). Extolled by Keynesian economists and respected by the mainstream as proficient, Kaldor was one of the few economists who not only dared but was given a platform on which to voice visionary global solutions for the world’s ills. Both proposals dealt with maximizing the productive use of each economy’s resources and promoting progress to their theoretical production possibility frontier. While the first was criticized as a ‘soft money’ policy, the second should have been considered as ‘sound money.’

In ‘The Case for an International Commodity Reserve Currency’ (Hart, Kaldor & Tinbergen, 1964) Kaldor wanted to achieve three goals. Firstly he wanted to resolve the international liquidity crisis of the 1960s where the limited growth in gold reserves had pushed the US dollar into the role of key currency reserve, and whose growth was dependent on unsustainable US balance of payments deficits. Kaldor felt that the creation of

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1 Kaldor drafted the text (Hart, 1991, p. 562); Tinbergen was primarily a signatory (Toye & Toye 2004, p. 221).
a new reserve currency backed by real assets other than gold, but no less homogeneous, was seen as preferable over the other proposals at the time which were to either broaden the basket of key currencies or to adopt the “Triffin proposal” for a credit creating World Central Bank (Kaldor 1964, p132 – 146). Some compromise of the Triffin proposal was ultimately adopted in 1968 with the creation of the Special Drawing Rights (SDR).

Secondly he wanted to promote industrialization of the world’s poorest countries. For such growth to proceed unimpeded, required was a matching expansion of production and trade in primary products. A commodity bufferstock would stabilize prices and allow for the investment in such treasure. Thirdly, Kaldor wanted an international monetary system that would allow for domestic monetary and fiscal autonomy. He had promoted full employment policies in NIFE only to be criticized for ignoring the risks to inflation. The introduction of a commodity bufferstock would be an automatic stabilizer into world trade that would inject liquidity when demand was low and allow government full employment policies while moderating cost-push inflation.

Kaldor believed that in a well-ordered world economy only natural resources (land and non-renewable resources) impose limits on expansion. The commodity-reserve proposal in terms of international financial architecture was a ‘gadget’\(^2\) that operated on both the monetary system and the system of primary-production to promote robust and sustainable economic growth across the developed and developing world. The scheme was envisioned as a comprehensive solution to ‘an international monetary “system” [that] is a worn-out contraption held together by the baling-wire of shortsighted improvisations, rather

\(^2\) Kaldor used the term in a letter to Sidney Dell, 23 March 1963, cited in Toye & Toye (2004, p. 221)
than a coherent structure that can be a focus for the much-needed economic solidarity of the countries that make up the world economy’ (Hart, 1976).

This paper will proceed by first considering the havoc that volatile commodity prices wreak on developing countries and list the standard microeconomic remedies advocated by international development authorities. Section three will contrast such policies with those proposed by Kaldor’s global macroeconomic approach. Section four summarizes the CRC in its role as a “new Bretton Woods” that would facilitate stable and equitable growth between regions. The paper ends with an application of the CRC to current problems, highlighting Lietaer’s modern day proposal (2004) for the private issuance of commodity backed money.

2. The Standard Analysis of Commodity Price Instability

While the world economy has gone through enormous changes in the past three decades, one fact still remains: a large number of developing countries are still greatly dependent on exports of primary commodities. According to the UN, 95 out of 141 developing countries depend on commodities for more than half of their export earnings. For 70 of these, such revenues were generated by only three commodities (Fréchette 2003). Commodity price volatility and the decline in the terms of trade for primary producing countries are, accordingly, significant issues.

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3 Among sub-Saharan and African countries commodities typically exceed 50% of total exports, especially for Burundi (97%), Madagascar (90%), and Zambia (88%). Even among a few developed countries (Australia, Iceland, Norway, New Zealand, and Canada), the share of primary commodities in exports is quite high (54%, 56%, 63%, 36%, and 16% respectively) (Cashin et al., 2002).
There are four well-established stylized facts about primary commodity prices: high volatility;\(^4\) asymmetry (the tendency for price slumps to be much more prolonged and deeper than peaks);\(^5\) a general co-movement of unrelated commodity prices;\(^6\) and the secular trend in commodity prices, either downward or in very long cycles.\(^7\) All of these factors are detrimental to commodity producers. High volatility creates income and consumption uncertainty while asymmetry means protracted periods of low income. And the declining trend, if it is likely to persist, implies that there is little long-term hope for commodity producers. Commodity price co-movement implies that there is little prospect for producers to overcome these risks by diversification of crops. These factors do not bode well for the growth prospects of many developing countries which depend heavily on primary commodity exports, or of primary producers in industrialized countries.

The controversial Prebisch-Singer thesis, which posits that the terms of trade have deteriorated against primary producers in favor of manufacturers, remains unresolved in the literature.\(^8\) A price series for non-fuel commodities (excluding oil and precious metals) can be seen in Figure 1. While the decline in real commodity prices relative to consumer

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\(^4\) This is well documented by many sources. The more interesting aspect of this is the steady rise in volatility since the early 1970s (see Reinhart & Wickham, 1994; Cashin & McDermott, 2002).

\(^5\) See Deaton & Laroque (1992) and Cashin, McDermott & Scott (1999a).

\(^6\) The co-movement of commodity prices due to macroeconomic causes is well documented (e.g. Borensztein & Reinhart, 1994). The possibility of ‘excess’ co-movement beyond this, suggested by Pindyck & Rotemberg (1990), which has been much disputed (see Cashin, McDermott & Scott, 1999b).


\(^8\) For example Lipsey (1994) suggests that the relative price decline in commodity prices reflects quality improvements in manufactured goods that are not well reflected in the manufactured goods price index.
prices over the past century is unmistakable\(^9\), the fixed exchange rate Bretton-Woods era (from 1946 to around 1971) was a relatively steady period for the terms of trade of commodity producers relative to manufacturers. Price volatility increased significantly from 1971 with the move from fixed to floating exchange rates for most primary commodities (Cuddington & Liang 1999), and real prices sometimes changed by as much as 50 per cent in a single year (Cashin & McDermott 2002, p. 176). The degree of price volatility is commonly recognized as much more troublesome for commodity producers than the downward trend. The declining trend in commodity terms of trade is not only due to supply or technology changes but is also ascribed to higher volatility itself, with the move from fixed to floating exchange rates and the greater openness to trade. While demand cycles will cause volatility in supply constrained commodities where inventories are low, volatile commodity prices in turn reduces demand for those goods (Kaldor 1975).

\(^9\) Cashin & McDermott (2002) have estimated a slow average decline in real commodity prices of 1 percent per year over the past 140 years.
The commodity policies proposed by most economists and international agencies have been formulated as microeconomic solutions to what are seen as microeconomic problems. High volatility is often ascribed to price-inelasticities of demand, to time-lags in the adjustment of supply to price changes, to international trade barriers and to the influence of speculative expectations on the holding of commodity stocks. The downward secular trend is blamed largely on technological changes that have boosted crop yields and mineral-extraction rates, and on the price and income elasticities of commodity demand. Asymmetry has been blamed on private speculative storage, while a good part of co-movement has been blamed on speculator ‘herd effects’ and on liquidity constraints.

At the risk of over-simplification, one can divide the variety of microeconomic policy recommendations aimed at helping primary producers into two broad categories:
those that focus on directly affecting producer income, and those that work indirectly by managing the prices they face.

The former are more modern policies that effectively surrender to the inevitability of market price movements. Recommendations in this category include diversification away from primary commodities and towards manufacturing (by, for example, protecting and subsidizing manufacturing industries); direct income supports, including aid (e.g. compensatory financing schemes, farm subsidies, etc); and increasing access to and provision of credit and insurance services for primary commodity producers (futures markets can provide short-term price insurance). All of these have been the typical policies of UNCTAD which is often critical of free market proposals but is hesitant to suggest anything that is significantly counter to the ‘Washington Consensus.’

Income supports depend on the extent of authority wielded by public policy-making entities and on budgetary resources. Primary producers within industrialized countries are often politically and socially powerful ‘traditional’ sectors that can garner such a redistribution of wealth from industry and labor to agriculture and mining (e.g. from US tax payers to US farmers and oil producers; or from industrialized Germany to agricultural France within the EU). Such income transfers have had less success within poor developing countries that lack the necessary financial resources and are often dependent on IMF or World Bank loans (which are often conditioned on liberalization and privatization).

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10 The summary of a 2003 UNCTAD meeting of experts on commodities markets recommended the following policies: enhance equitable and predictable market access for commodities of developing countries; address the oversupply of many commodities through trade liberalization (especially by developed countries who subsidize) and diversification by the developing world; make compensatory financing schemes user-friendly and operational; strengthen property rights and access to credit; and create of a new International Diversification Fund (UNCTAD, 2003).
Between nations there is only very weak political backing for income transfers, despite the rhetoric on development aid.\textsuperscript{11}

The second and older sort of policy prescription is to tame commodity prices themselves, which would then stabilize income and investment. Such operations have been both unilateral and multilateral. Unilateral operations include commodity cartel action, the most famous and successful example of which is OPEC. However, these are rarely successful—as numerous more tentative cartels have found (LeClair, 2002). Government-sponsored price-support schemes, such as domestic guaranteed agricultural prices, can also be seen as unilateral action. Unilateral action is usually aimed at boosting rather than stabilizing the income of producers of specific commodities. Price stabilization in this case is more of a cover for engineering income transfers to producers (or, in the pernicious case of African marketing boards, transferring income from producers to the State).

Consequently, it is often associated with market distortions (although such cartels would argue that they were created in response to other market distortions, such as trade barriers and collusive buyers).

Multilateral actions where producing and consuming nations, often with their UN supervisors, create international agreements were common in the 1970s, and they typically sought to reduce volatility and smooth secular trends in terms of trade with bufferstocks and producing-country export quotas. They included the international commodity agreements hammered out over the past half-century (e.g. sugar, tin, cocoa, coffee, rubber) and endorsed by the 1975 UNCTAD Nairobi resolution and the 1982 Brandt Report. However, one by

\textsuperscript{11} One example of international income compensation was the STABEX subsidy, which transferred income from Europe to its post-colonial nations when commodity prices fell. This treaty took effect in 1975 and ended in 2000 when it was condemned by the WTO as anti-free trade (LeClair, 2002).
one, these commodity agreements collapsed in the 1980s and 1990s. The last one, concerning rubber, met its demise in November 1999.\textsuperscript{12}

The breakdown of individual cartels and the UNCTAD international commodity agreements for price stabilization can be ascribed to various causes. The immediate reason was that they worked on the basis of consensus and international cooperation, which are always difficult to maintain. Countries tended to react to commodity price booms as if they were plateaus, and so were not willing to release stores during booms. Furthermore, groups of producer nations sometimes came to believe they could achieve their objectives by unilateral cartel-type action. Of course, there was the natural haggling about ‘unfair’ quota allocations. Also the asymmetry in commodity prices did not help: long-run slumps made the management of commodity stores costly and long cycles meant that stockpiling was not viable for most governments (Cashin et al., 1999).

Since the 1980s, commodity agreements have not been resurrected, partly due to a political and intellectual climate which frowned upon the establishment of what were increasingly seen as distortionary institutions. By itself the cartelization movement of the 1970s and ‘80s did reduce price variability of commodities somewhat, but it did not halt the secular trend of commodity prices (LeClair, 2002, p. 12). Policy recommendations shifted strongly towards the non-price types of policies mentioned above, most notably, recommending the use of futures and other risk instruments to hedge price risk. This went hand in hand with the liberalization and privatization of commodity markets.

During the 1980s and 1990s, most developing countries undertook far-reaching reforms focused almost exclusively on market forces for more efficient resource allocation.

\textsuperscript{12} For detailed accounts of the history of international commodity agreements, see Maizels (1992) and Maizels et al. (1997).
Through improvements in the incentive structure and on reduced discretionary state intervention. Domestic investment for diversification, the remedy of choice, was made more difficult by the additional goal of trade liberalization. In part, this was answered by opening up the capital account to promote FDI in the manufacturing sector. Unfortunately diversification, which was meant to promote industrialization, manufacturing, technological upgrading, and the allocation of existing resources more efficiently through flexible prices, instead often led to deindustrialization, rising inequality, balance of payments difficulties, inflation, rising interest rates, and currency appreciation. These factors reduced domestic investment and compromised the international competitiveness of domestic producers, adversely affecting trade performance. By 2006 the orthodox reform agenda which was based on getting relative prices ‘right’ at the microeconomic level had been declared a failure: in too many cases it got prices ‘wrong’ at the macroeconomic level (UNCTAD 2006, pp. iv-v).

While reducing dependence on agricultural incomes, diversification also reduced food security and rural employment. Rural to urban migration increased and worsened poverty levels in the cities. Diversification away from rural production reduced the number of farmers, strengthening the relative position of large farmers and corporations. In Africa, Latin America and the Caribbean most FDI did not promote manufacturing. Instead it was concentrated in resource extraction with weak linkages to the domestic economy (UNCTAD, 2006, p. viii). The weak bargaining and regulatory capabilities on the part of host-country governments transferred ownership of commodity production into the hands of large foreign-based transnational corporations.  

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13 UNCTAD (2006, p. 27) estimates that among countries who export mining products, two-thirds of their income gains from the improvement of the terms of trade since 2002 have been offset by higher net income payments abroad to transnational corporations.
Despite the attempt to be less dependent, after 25 years of market reforms, the commodity sector continues to be the mainstay of many developing country economies in generating income, savings and foreign exchange, as well as employment and livelihoods. The well-worn policy advice given to developing countries to acquire the financial skills to minimize risk and to diversify production so as to stabilize income or export revenue, has missed the need for an integrated model of agriculture and industry. While export-led growth can remove the reliance on domestic demand and lift the balance of payments constraint, for this foreign multiplier (Harrod 1933) to work it must be supported by the right terms of trade between commodities and manufactured goods to give rise to a virtuous cycle of cumulative growth between the commodity producing and commodity importing countries.

3. ‘Kaldor’s Continuous Concern for Commodities’

In an early phase of his economic theorizing, Kaldor (1952) preferred a quota system over commodity bufferstocks on microeconomic grounds. His resistance to bufferstocks rested on two ideas: first, that price signals are necessary for allocating resources; and secondly, that price stabilization increased income instability from supply shocks when demand is price-elastic (Spraos, 1989, p. 206).

As Kaldor’s professional interests came to be dominated by macroeconomic concerns, so too his focus on commodities switched from their microeconomic to their macroeconomic aspects. He came to see the signaling properties of prices as less

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14 This heading was the alternative title of Spraos 1989 paper.
significant, and shifted his attention to the role of commodity stocks as alternative signalers. According to Spraos (1989, p. 210) this shift of focus should not be interpreted as a repudiation of the earlier analysis. There is just more at stake now; the macroeconomic objectives are dominant and that affects the ranking of the instruments. Some allocative efficiency is traded-off against greater macroeconomic stability or enhanced growth.

Kaldor’s distinction between the ‘primary’ and ‘secondary’ sectors—‘natural resources’ and ‘industry’—is central to his explanation of the inherent global disparity in economic development between the industrialized North and the commodity-producing South (see Kaldor, 1976, 1979, 1977, 1981, 1983). In Kaldor’s view, natural resources such as agricultural, mineral, or energy resources, are ‘neoclassical’ commodities: stocks are generally ‘fixed’ in the short run, market clearing is obtained through price adjustments, and for a given technology there are decreasing marginal returns to factor use. In contrast the manufacturing sector, which transforms primary commodities into capital or consumption goods, exhibits increasing returns to scale and has monopolistic features. Each firm needs to increase market share or its products will be squeezed out of the market. In aggregate there is no practical limit on the accumulation of capital through additional investment, which is limited only by the demand for these goods (Kaldor, 1983, p. 534). Firms usually operate at less than full capacity with administered (mark-up) prices on costs. Disequilibria in manufactured goods markets are reconciled by changes in the quantity produced (and attendant changes in unemployment, real income, and capacity utilization), while prices remain fixed. The labor market is likewise demand constrained given the mass of underemployment in the developing world and rural under employment.
For Kaldor neither capital nor labor constrains growth\textsuperscript{15}, partly because capital is automatically generated as a consequence of the growth in demand, partly because both these factor inputs are mobile between sectors and countries, and partly because land and labor are never optimally allocated (Kaldor, 1981, p. 339). While primary producers, manufacturers and laborers all demand each other’s outputs, Kaldor (1981, p. 348) concludes that ‘it is the growth in the output of primary products (food, fuel and raw materials) which govern the rate of economic growth generally, and not the capital accumulation or some exogenous growth rate in the labor force.’

As we have seen in Section one of this paper, price volatility and declining terms of trade in primary commodity markets were major concerns for development economists in the 1970s and ‘80s. Kaldor did not believe that a flexible price mechanism would bring about stability in these markets. Worse, commodity price volatility was apt to cause a long-run secular price decline since ‘[a]ny large change in commodity prices—irrespective of whether it is in favor or against the primary producers—tends to have a dampening effect on industrial activity’ (Kaldor, 1976, p. 520). According to Kaldor:

\begin{quote}
The emergence of commodity surpluses which should, in principle, lead to accelerated industrialization may have a perverse effect by diminishing effective demand for industrial products [by primary producers]. Similarly the emergence of shortages which should accelerate the growth of availabilities of primary products through improvements in the terms of trade may lead instead to an inflation of manufacturers’ prices which tends to offset the improvement in the terms of trade,\
\end{quote}

\textsuperscript{15} While Kaldor (1966) in “Causes of the slow rate of growth of the UK economy” concluded that labor was the bottleneck to economic expansion, he completely rejected this in subsequent articles and conveys the idea “that there has never been such a labor constraint except from a purely short term point of view. There may be a scarcity of trained or skilled labor, and labor may be relatively immobile, but these are short-term constraints. If there is one thing which exists in superabundance, it is labor” (1996, p108).
and by its dampening effect on industrial activity, worsens the climate for new investment in both the primary sector and the industrial sector (Kaldor 1976, p.520).

Kaldor realized that productivity gains and technological progress in the extraction of natural resources are desirable, and can potentially aid industrialization and maximize world wealth. But since increases in commodity production need not lead to an increase in purchasing power to absorb this supply, these productivity improvements can generate a resource curse.\(^\text{16}\)

Kaldor (1983, pp. 346–347) stressed that the tremendous acceleration of population growth and capital accumulation over the past two centuries was predominantly due to land-saving (or natural resource-saving), not labor-saving, innovations. Yet, the neo-classical view … regards the ‘natural rate of growth’ … as being determined by the growth of the labor force, plus the growth of labor productivity due to technical progress. This view, which dominates the thinking of most professional economists, abstracts from Nature as a factor of production (or rather as a ‘constraint’) entirely. (Kaldor, 1981, p. 48)

Kaldor attributed this belief to developed countries historically having the ability to discover and develop new areas and through the relative plentitude of natural resource-saving innovations. But while primary commodities may be in excess supply for countries that are already fully industrialized, they could only be considered ‘superfluous’ if one ignored the

\(^{16}\) Kaldor’s argument harks back to Benjamin Graham’s insistence that commodities always have a fundamental value. Problems arise from the functioning of the system, not from the increased output of commodities per se: ‘if surplus stocks do operate as a national liability rather than an asset, the fault must lie in the functioning of the business machine and not in any inherent viciousness of the surplus itself…. Some means must be found to restore the Goddess of Plenty to the role of benefactress-in-chief that was hers without question under a simpler economy’ (Graham, 1937, pp. 16–17).
goal of accelerated industrialization of the world’s poorest nations (Ibid). This remark by Kaldor mocks not just the myopia of neoclassical economists, but also their fixation on asserting the primacy of market prices.

Kaldor adopted the commodity reserve currency as a solution to world growth and distribution. Such a policy would promote export-led growth initially of commodities and then of manufactured goods. Kaldor thought it unfortunate that Keynes’s consumption multiplier had overshadowed Harrod’s foreign trade multiplier (Harrod, 1933), which he deemed ‘a far more important and basic factor in explaining the growth and rhythm of industrial development’ (Kaldor, 1976, p. 361). Trade would allow the components of domestic demand (consumption, investment and government expenditure) to grow faster and terms of trade would determine the degree to which there may be balance of payments difficulties.

While export growth can be accelerated through marketing efforts and innovation aimed at creating goods with larger relative income elasticities, it is easier for developed industrial economies that export manufactures that are successful in product development, and that have high income elasticities for exports and low elasticities for imports. These countries will be first movers, become trade leaders and will experience a virtuous circle of cumulative growth. As outsiders, developing countries will have a much harder time competing in this role. Countries dependent on exporting commodities have a high income elasticity of demand for imports (manufactured goods), and hence a lower trade multiplier for domestic demand, and have a much harder time finding buyers for any surplus output.
While developing countries may be well advised to develop their manufacturing sectors and diversify away from commodities, their ability to do so is limited. Increasing returns comes with specialization and “roundabout methods of production” in manufactured goods (Young 1928). Without first-mover advantages, countries will not be able to compete with mature markets and must rely on commodities to raise the foreign exchange necessary to import intermediary capital goods for investment in infrastructure and manufacturing sectors. If infant industry protection is instituted in developing countries then there is some chance of a better outcome, but history demonstrates that this can easily go awry. Kaldor argued that import substitution must be lifted quickly to bring local industry goods into global competition for export (Kaldor).

According to Kaldor, advocating diversification misses the point that the production of primary commodities is essential to world growth, in rich and poor countries alike. Economies progress in stages, and at every stage commodities are essential, even if they become a smaller and smaller share of employment. After all, it is the growth of output in primary commodities that sets the limits on growth in manufacturing. In Kaldor’s simple two-sector model it is not necessary that agriculture and industry grow at the same rate, but their growth must be balanced with one another, else overall growth will be constrained:

[In a well-ordered world economy it is the product of nature that sets the limit to expansion. The expansion of industry is limitless; labor reserves are abundant, and capital accumulation can be speeded up continuously with an expansion of industrial production and employment. But these industries use the product of nature, and at any stage of technology, nature can yield a certain maximum and no more. Thus, in the long run, it is the rate of growth of land saving innovations in agriculture that sets the limit to the growth of the world economy (Kaldor, 1996, p. 112, emphasis added).]
The pace of industrialization in the 19th and 20th centuries in the developed world was dependent on their access to commodities (either through their own production, their colonies, or imports). But this industrialization does not lessen their dependence. At the heart of most industrialized countries primary product protection is the risk that a balance of payments constraint may become serious, in which case access to ones own primary commodity and energy sources is a security issue that they readily protect. Looking at Figure 2 it is apparent that despite industrialized countries having a significantly lower labor force in primary production, they still export most of the world’s commodities and yet have only one fifth of the world’s people.

*Figure 2. Agriculture export share (excludes intra-EU trade)
By income group (1985 – 2004)*

Kaldor’s adoption of the CRC plan addressed four of his favorite policy objectives: general equilibrium analysis as the world is the only closed unit; the provision of full
employment policies by supporting effective demand; the facilitation of industrialization in the South; and the creation of liquid reserves for development and trade.

4. An International Commodity Reserve Currency (CRC)

Kaldor’s CRC proposal built directly upon the proposal outlined by Benjamin Graham in *World Commodities World Currency* (1944) for international monetary reform, and its precursor *Storage and Stability* (1937). Graham had been a colleague of Albert Hart’s at Columbia University. Hart (1991, p. 561) tells us that Kaldor’s advocacy of the CRC goes back to 1948. No doubt his thinking on this matter was heavily influenced by his peers at the UN: Richard Kahn, Jan Goudrian, Sydney Dell, Raúl Prebisch and Hans Singer (see Toye & Toye, 2004). Similar to what Prebisch and Singer termed as ‘North’ and ‘South’ Kaldor relied on a simple but effective two sector model, of agriculture versus industry, within a country and between commodity dependent and industrialized countries.

The CRC would balance growth between the two sectors, by maximizing global demand in industry and stabilizing cost push pressures or inflation from resource constraints. Kaldor wanted to maximize global welfare by removing any effective demand or supply constraint arising from macro coordination failures and ensuring that the world operates at the international production possibility frontier. The remaining presentation here will cover the description of the plan layed out by Kaldor et al (1964) and Hart (1976), and in places updated for the current climate.

Kaldor’s 1964 CRC paper, co-authored with Albert Hart and Jan Tinbergen was written to address the implications of the breakdown of the gold standard for

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17 Early variants of this scheme were also proposed by Jan Goudrian (1932) and F.A. Hayek (1943).
underdevelopment. The CRC would keep the flows of production and consumption in balance, with adjustments proceeding smoothly and continuously without upheavals in inflation or recession. Consumption spending would adjust to the limits set by production possibilities rather than the other way around, so that ‘in the longer run … the supply of basic materials … would set the limit to the rate of growth of world industrial production and not, as now, the rate of growth of effective demand, emanating from the advanced countries’ (Kaldor, 1975)

The mechanics of the proposed international commodity buffer stock plan are quite simple. Underlying the system is an international organization—proposed to be a division of the IMF that we shall refer to it as the ‘International Commodity Fund’ (ICF). The ICF buys and stores a composite bundle of commodities in exchange for warehouse receipts. These receipts would effectively become an international commodity reserve currency, redeemable in commodities at the ICF’s stores; it could also be used for the pricing and settlement of trade contracts between countries or companies.

The basket will be of standardized commodities, such as those quoted on commodity exchanges, that have a low cost of storage. The composition of this basket would be determined by international agreement; ideally, the basket would be composed of a wide range of standardized and durable commodities which are universally used, and whose values therefore, taken individually, would not be greatly changed by their use as a reserve medium. The relative proportions of the commodities in the basket would be determined by their share of world trade (periodically re-evaluated). Graham believed that
this made the index and monetary policy apolitical and non-discretionary.\textsuperscript{18} Table 1 (below) presents an example of a basket containing 28 commodities based on Hart (1976).

Kaldor was very concerned about the secular drift of average prices. Sharp changes of supply or demand in any one commodity market should trigger an adjustment in its price rather than induce compensating changes in the prices of other commodities (Hart, 1991, p. 568). Commodities prone to high price volatility should therefore be excluded from the bufferstock. This is why oil and coal is omitted from the Kaldor-Hart-Tinbergen basket, though both were included in Graham’s 1937 list. Precious metals may also be excluded because their price is often influenced by factors unrelated to the global economic cycle.

\textbf{Table 1. Standardized and storable commodities for possible inclusion in an international commodity reserve currency.}

<table>
<thead>
<tr>
<th>Agricultural Raw Materials</th>
<th>Edible Oils</th>
<th>Metals and Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotton</td>
<td>Rapeseed</td>
<td>Copper</td>
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<tr>
<td>Wool</td>
<td>Canola</td>
<td>Zinc</td>
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<tr>
<td>Rubber</td>
<td>Palm Oil</td>
<td>Tin</td>
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<tr>
<td>Wood</td>
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<td>Lead</td>
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<tr>
<td>Paper Pulp</td>
<td>Food and Beverages</td>
<td>Aluminum</td>
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<tr>
<td>Wheat</td>
<td>Sugar</td>
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<tr>
<td>Corn</td>
<td>Coffee</td>
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<tr>
<td>Rice</td>
<td>Tea</td>
<td>Natural Gas*</td>
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<tr>
<td>Soybeans</td>
<td>Cocoa</td>
<td>Ethanol*</td>
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<tr>
<td>Oats</td>
<td>Pork bellies, frozen</td>
<td>Bio-diesel*</td>
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<tr>
<td></td>
<td>Orange Juice, frozen</td>
<td>Carbon Permits*</td>
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<tr>
<td></td>
<td>Dried Milk</td>
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</tbody>
</table>

*Commodities not in previous CRC plans.\textsuperscript{19}

\textsuperscript{18} Targeting this ‘objective’ index would remove lobby groups and if monetary policy was simply a rule based automatic stabilizer to maintain this index within a band (Graham 1937, ??).

\textsuperscript{19} The suggestion of Carbon permits comes from Lietaer (2004).
Commodities would be stored at the points of origin or along the normal routes of trade where storage facilities exist and where traders could economically give or take delivery. Hence storage and trade could be contracted out by the ICF, to the extent that effective monitoring could take place. Since the 1990s commodity exchanges have sprung up around the developing world. The warehousing, cataloguing and trading of commodities has become increasingly organized. This has enabled direct financing to individual producers through warehouse receipts and new structured finance arrangements (Rutten, 2001). While exchanges facilitate the financing of commodity purchases, they could also be used by the ICF to issue CRC receipts. The existence of non-commercial bufferstocks will create strategic reserves, remove price manipulation from local monopolies, reduce the desire for private storage and encourage output expansion and efficiency (see Sapros, 1989).

The mandate of the ICF was to buy and sell commodities in order to stabilize the price of the commodity basket within some range. Hart (1976) proposed a 10 percent spread between the bid and ask prices at which the ICF stands ready to buy or sell. For example if the designated basket unit is priced at B$ 1,000,000 bancor units, the ICF would be ready to buy additional basket units at B$ 950,000 or ready to sell basket units at B$ 1,050,000. It is important to note that we are not referring to the stabilization of specific commodity prices in terms of the bancor. Prices of individual commodities in the basket would be allowed to fluctuate freely relative to each other. Commodity brokers, operating at a small competitive dealer’s profit through arbitrage between individual commodities and the index, would help to stabilize individual commodity prices while at the same time allowing relative prices of

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20 Monitoring would be far less onerous than modern day carbon emissions.
21 To use (as Kaldor did) the international currency unit named by Keynes in his famous International Clearing Union proposal.
commodities within the index to change. The target basket price will be based on some historical average, e.g. past 10 years, and re-evaluated to meet the goal of a long-run stable inventory as a percentage of world trade. Kaldor suggested that commodity-reserves should grow at 3 per cent per year. This could be different from the rate of growth of industry, but it would be a rate that brought these two sectors into balance and stabilized the terms of trade. International monetary policy could be rule-based, or follow a more discretionary model. Kaldor intended the CRC to re-link monetary issuance to the real economy at both the international and domestic levels. All central banks could use the CRC (or in effect their local commodity markets) as a substitute for open market operations. Dealing directly with primary producers would ensure that such operations have a direct and powerful effective demand on incomes (Kaldor, 1975), as opposed to the current dealings in fiat currency and open market operations with banks and high-grade substitutes for money (such as Treasury bills). Since under the endogenous money thesis loans are determined by effective demand, such an increase in bank reserves may not lead to an increase in income.

Commodity futures contracts should be substituted for physical commodities in all such cases in which, owing to a shortage of private stocks, the future price is below the spot price by more than a reasonable margin (related to the cost of carry). The ICF would then be ready to substitute futures for physical (spot) holdings of foodstuffs during famine or crises in other security related commodities. It could roll over these futures positions until the market had recovered its balance (Hart, 1976, p. 7). This would be a substantial improvement over the current (2008) situation, where food aid is typically tied to the purchase of products from the donor country. Such aid conditions aggravate the problems of
recipient countries by creating a reliance on imports and stifling the investment necessary for long-run food security (OECD, 2005).

The ICF’s currency units—the CRCs—are similar to other international reserves issued by the IMF in the past, except that they are redeemable for a fixed basket of commodities, rather than precious metals or a basket of international currencies (SDRs). Under a CRC each nation is free either to peg its national currency to this unit or allow it to float against bancor (Hart, Kaldor & Tinbergen, 1964, p. 157). It is expected that the CRC would over time stabilize the value of individual commodities, and thereby stabilize the terms of trade of commodity producing countries since the terms of trade are strongly correlated to world commodity prices, whether a country has fixed or flexible exchange rates (Cashin et al., 2002). As well, global trade imbalances are apt to be smaller in a world where reserves can be issued by many countries spread widely across the globe, rather than by a single big player like the United States.

To be in a position to make good its selling offers, the ICF would have to accumulate a sufficient reserve of commodity baskets before full operation could start. This may take up to 5 years and could be delayed further during a period of tight commodity markets. As the booms usually sow the seeds of crashes it is quite likely that the current commodity boom will turn into a speculative bubble and fall, potentially leading to devastating events for many commodity producers. During the fall of this cycle would be a good time begin the stockpiling of such inventory.

While storage costs were a concern, there was the possibility that they would be paid for by the profits gained from open market operations conducted by the ICF which would be

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22 The operation of the CRC would differ sharply between the initial build up period and the ensuing operation period; see Hart, Kaldor & Tinbergen (1964) for a more detailed.
mean reverting. Even if this was not the case, the social gain from such a reform to the monetary system would dramatically outweigh the additional cost (Hart 19??). A CRC can promote a long-run fair price for commodities which is conducive for investment and efficient production of commodities for both small and large players. But beyond price stability it also contributes to quantity insurance which is absent from futures market contracts. The CRC would stimulate investment in the production of raw materials while at the same time put an end to a world wide monetary disorder and global imbalances that is caused by the US dollar being the world’s reserve currency (see D’Arista & Griffith-Jones, 2006).

Kaldor argued that an improvement of the terms of trade for commodity producing countries, along with moderate inflation, could be sustained through the creation of an international commodity fund. The fund would remove global excess commodity supplies from the market and ensure supply security. It would stabilize a commodity index, made up of a basket of commodity prices and thereby reduce volatility of individual commodity prices, without restricting relative prices changes between commodities in the basket from important long-run supply and demand determinants. It would promote industrialization of commodity producing countries by supporting export led growth via pro-employment policies in the developed countries. Access to an international labor pool and stable commodity prices would increase employment worldwide. The issuance of an international reserve currency in exchange for commodities would connect the financial flows with the real economy, supplying the ‘right’ amount of liquidity. While national exchange rates could remain flexible, the issuance of the commodity reserve currency would be spread across the globe rather than being issued by one country. The direct access to reserves
through commodity production would help remedy the current crisis of global imbalances, where export oriented countries have an incentive to devalue their exchange rate.

By 1983 Kaldor had abandoned the CRC due to likely implementation problems related to politics (“not possible in today’s neo-liberal climate”), in favor of the simpler scheme of individual commodity bufferstocks (Kaldor, 1983, p. 548). But in the 1984 Mattioli Lectures, just two years before his death, Kaldor repeatedly opined that a world wide bufferstock scheme was the best solution to remedy the lack of world demand and fixing the world trade cycle. But the European Community could go a long way to improve their own situation, without the USA. Kaldor believe that every country in the European Community could improve its current situation if the Common Agricultural Policy was taken out of its fiscal framework and instead financed by newly printed money which would be accepted by a European Central Bank as a reserve against commodities. “This would be a good idea for helping Europe in the absence of something better” (Kaldor 1996, p109).

5. Today’s Commodity and Currency Climate

Since 2002 the terms of trade have improved for a great number of commodity producing countries. Strong global demand stimulated by low interest rates, and powered by the demand for raw materials from China’s industrialization, has led to a significant rise in commodity prices, especially for mineral and energy goods. From 2003 until the credit crisis of 2007, growth had been unhindered by liquidity constraints or inflation triggers. Economic growth has been accompanied by a deflation in manufactured goods prices as the decline in wage growth and access to cheap labor pools has brought down their cost of
production. This has offset the cost-push effect of rising primary commodity prices (which are 25 per cent of global merchandise trade). Monetary and fiscal policy have remained accommodative, especially in Japan and the US. Consequently, many developing countries have experienced strong export led growth. [All? Sudan, Sierra Leone, Somalia? There remain a few basket cases, notwithstanding up-ticks in their exports.]. Even those developing countries reliant on oil imports have witnessed an increase in their exports and have been compensated for their terms of trade losses in this respect (UNCTAD, 2006, p. 28).

Despite predictions of declining economic growth from oil price hikes, the overall rise in other commodity prices appears to have contributed considerably to that progress that has been made toward achieving the UN’s Millennium Development Goals, although these are far from being met. The commodity transmission mechanism has been virtuous to date because rising commodity prices have had limited impact on core inflation and because the developed countries have not implemented tighter monetary policy.

These circumstances may not last. Moreover, the virtuous commodity transmission mechanism needed to raise growth rates for all economies suffers from growing financial instability. The demand that has supported the China’s manufacturing sector, and in turn that country’s demand for commodities, originates from consumption and government spending in the US. The US, as the sole issuer of the reserve currency, has been able to increase its current account deficit to potentially unsustainable levels (see D’Arista & Griffith-Jones, 2006).

Fears of an overdue depreciation of the US dollar may ultimately cause a crisis in confidence and lead to a sudden sell-off of US dollar reserves and a sharp retreat from US
capital markets. A recession in the US will show up as excess capacity and a decline in new investment in China; there is strong potential for contagion to the rest of the world, especially for commodity dependent economies.

While rising commodity prices of non-fuel commodities have invigorated developing countries’ export led growth and increased their demand for imports, concern has fermented in the industrialized countries that rising energy and mineral prices might stifle their own growth. In 2006 the Australian and Canadian governments raised this issue at the annual G20 meetings; the workshops exposed growing concern over supply continuity, investment efficiency, the increase in market concentration and the danger of political struggles over limited supplies. There was also a recognition that, as resources become less diversified among producers, there would be growing import dependence among countries, and the potential for a widening of trade gaps. The International Energy Agency has suggested that at current rates of world growth, energy demand will be 25 per cent higher in 2015, and 50 per cent higher in 2030: ‘The energy future which we are creating is unsustainable. If we continue as before, the energy supply to meet the needs of the world economy over the next twenty-five years is too vulnerable to failure arising from under-investment, environmental catastrophe or sudden supply interruption’ (IEA, 2006, p. 3).

During the past four years, metals prices have increased more than oil prices, while food and agriculture had more moderate increases (see Figure 4). But as bio-fuel technology improves, reducing our reliance on hydrocarbons in response to global warming, we can foresee several agricultural commodities moving into this energy category, e.g. corn, soybeans, canola, rapeseed, palm oil, sugar, switch grass, plant pulp etc. Already, ethanol is
expected to consume one quarter of US corn production in 2007 (Financial Times, March 27, 2007, p. 13). These commodity prices may be expected to become more closely correlated with the price of crude oil. This is already the case with sugar due to the efficient production and export of Brazilian ethanol. Higher prices for bio-fuel inputs will likely push up the price of partial substitutes, such as wheat and rice, and other edible oils. Hence it is likely that concerns over energy and mineral security will touch on many of the storable commodities included in Table 1.

As for supply responses, the standard mantra in all these negotiations is that regulatory distortions must be minimized and markets must be transparent and efficient to ensure that price signals are clear. This approach, it is claimed, will ensure that long-term decisions are informed by reliable data, enabling market participants to manage risk effectively. Greater energy and resource security for importers is seen as a matter of reducing risk by diversification of energy sources (see Australian Treasury, 2006). The development of domestic stockpiles and storage facilities has been advocated but downplayed.

**Figure 4. Recent Developments in Commodity Prices**

(2002 = 100; monthly data; prices deflated by U.S. CPI)
In the end, individual countries faced with volatile market prices, will create individual bufferstocks and promote self-sufficiency either through reliance on their own resources or by extending their ownership to other resource-rich countries through foreign direct investment. The locking up of private supplies will reduce trade volumes and open the market to manipulation. The rise in firm concentration in commodity production has already led to an increase in cartels and to increased opportunities for market cornering and price manipulation. Such circumstances can, in the worst case scenario, lead to violent conflict over scarce sources.

The introduction of a CRC would provide an alternative reserve that could stabilize global balances and strategic reserves. The build-up of the commodity reserve bufferstock would maintain demand for commodities from the developing world even in financial crisis, reducing contagion of a global recession. A stable stream of export revenue in the
Commodity producing countries could be spent on importing capital goods and manufactures to aid in their industrialization and in lifting global demand. There would be less need for the accumulation of reserves by developing countries if their exchange rate was pegged to the CRC or stabilized through the price stabilization of their primary export. Reserve creation would be spread more evenly across countries, and prices of raw materials would be stabilized, limiting inflation to wage increases.

Countries could maintain strategic reserves, although, with greater confidence that prices are likely to stay tied to long-run fundamentals, they would be more willing to ‘lend’ these reserves to the ICF in return for international currency reserves. Insulating commodities markets from political wrangling will greatly improve the efficiency of commodity production. For example, ethanol production in Brazil is much more energy efficient and imposes less environmental damage (WEO IMF, 2006 p?). However the US is attempting to achieve self-sufficiency by 2017; to stimulate the needed 30 per cent increase in domestic corn production, the US provides a $0.51 per gallon subsidy and has imposed a $0.52 per gallon tariff on Brazilian imports. Achieving Europe’s 2020 goal will require about 18 per cent of total agricultural land to be set aside for rapeseed, wheat or sugar-beet, unless tariffs are levied on imported ethanol (IMF, 2007).

Obviously the success of a CRC depends on the degree to which an international institution, like an ICF, can create confidence in its ability to stabilize prices, to forecast future demand and hence maintain a stable inventory of the commodities which comprise the basket index. Bernard Lietaer (2004) has proposed an intermediary step towards such a policy—the private issuance of a commodity currency, which he calls a Trade Reference Currency (TRC), or Terra for short. This currency, like the CRC, would be backed by a
basket of commodities, with pre-specified quantities and floating prices. The Terra is envisaged as having only a dozen commodities, around half of the number that Kaldor suggested. Lietaer believes that this money would be issued privately, like a mutual fund where investors will buy into the fund in exchange for Terra securities. In this case the price of the commodity basket is not stabilized within a price band, although if the Terra becomes a large liquid market then Lietaer assumes that speculation and information alone would be enough to stabilize short term fluctuations. While there is not the monetary policy on liquidity issuance to stabilize a price index, there is a belief that monetary stability would be invoked by the issuance of currency with 100 per cent reserves. As with proposals for free banking, the aim is to remove the pro-cyclicality of endogenous money creation by the banking system.

The Terra currency, like the CRC, is issued against warehouse receipts of a commodity basket, but the cost of storage by the private commodity fund (TRC Alliance) will be paid by the bearers of the currency. The cost for holding Terra is expected to be 3.5 to 4 per cent per annum which would keep the currency in circulation as a planning, contractual and trading device for private companies. It most likely would not end up as a global reserve for a central bank.

Lietaer (2004, p. 4) reckons that, due to exchange rate uncertainty, international corporate barter, or ‘counter-trade,’ represents 10 to 15 percent of all international trade and that two out of three major global corporations now perform such transactions routinely. The Terra device would replicate counter-trade transactions but significantly reduce the cost of such trading.

Conclusion
The role of commodity prices in generating, propagating and transmitting crises or growth is well documented. It appears that the recent increase in commodity prices and improvement in the terms of trade by many commodity producing nations since 2002 has finally brought about a benevolent commodity transmission mechanism that has improved economic growth in the world’s poorest countries without triggering monetary contraction via inflation fears in the industrialized countries. It has been a bonanza for oil and mineral exporters. The gains have been more moderate for countries dependent on agricultural products, but these agricultural prices are expected eventually to rise with oil prices as bio-fuels become technologically viable. Driven primarily by the demand for commodities from the industrialization of China, world growth has increased and all countries seem to have benefited.

However the export led growth of the developing world is vulnerable to the instability of the current international financial system. In many industrialized countries the expansion of domestic credit generated by large inflows of capital has pushed the ratios of household debt to disposable income to historical highs. The US, as the issuer of world reserve currency, now finds itself with very large current account deficits that threaten the sustainability of the international financial system.

With transference of the world’s manufacturing from the developed economies to China, countries that produce raw materials and countries that import manufactures will increasingly face imbalances in their trade accounts, but there will be limited scope for bilateral negotiations to resolve these problems. The extent to which developing countries and the world will continue to benefit from tightening commodity markets will depend on
the political responses of the large industrial powers and on the evolution of supply and
global demand.

Commodity supply insecurity may lead to geopolitical jostling and to exclusionary
practices to lock up supplies. Rising commodity prices may elicit a tightening of monetary
policy in the developed world which would reduce growth for imports from developing
countries. An unwinding of the US current account deficit means reduced reliance on US
consumption as a driver of global demand. These trip wires are removed in Kaldor’s
international monetary reform which at its heart tries to balance consumption and
production and spreads the issuance of the reserve currency across the globe in a more
democratic manner. Instead of resorting to net exports as the only manner in which to
stockpile reserves, which are affected to the vagaries of world demand and exchange rate
policy, countries can now attain reserves through the production of commodities which they
can exchange for CRC.

Most discussions of globalization neglect the commodity policy dimension of the
international economy, despite the role of commodity markets in the global transmission of
economic impulses. Most discussion on development does not link agriculture with
industry, instead each sector is treated independently. Nicholas Kaldor elaborated upon a
novel plan for stabilizing the global economy by making primary quantities more flexible
and thus reduce their price volatility. Such a new reserve currency would allow full
employment policies in industrialized countries and regions without constraints to primary
inputs and its repercussions, such as cost-push inflation. His proposed commodity reserve
currency, along with full employment fiscal policies, would serve as an automatic
macroeconomic stabilizer – promoting free trade, balanced world growth, maximum
employment and price stability globally. While this plan requires initial international collaboration that may not yet be politically viable for its implementation, its very mechanics also offer us a novel and stimulating perspective on how to rethink global solutions to today’s financial and development dilemmas.
References


