Consumer Debt at the Center of Finance-Led Capitalism

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Texte d'une communication au colloque international organisé à Paris les 17 et 18 janvier 2008 par le CEPN et le SCEPA (centre de recherche de la New School, New York, www.cepa.newschool.edu), avec le concours du projet européen FP6 INEQ (www.criss-ineq.org) sur le thème :


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During the summer of 2007 the US housing crisis morphed into a global credit crunch that is threatening to disrupt the world economy. We are now (mid-2008) facing the prospect of a major slowdown or even global recession. No matter which of these scenarios will ultimately unfold, the ongoing crunch has put into question the long-term viability of a global growth pattern that for the last couple of decades has heavily relied on America as the world’s “buyer of the last resort.”

This dramatic turnabout endangers the smooth transition to a new, finance-led accumulation regime and multi-polar growth pattern. If not yet a systemic crisis, the current bout of troubles in the world’s major financial markets certainly marks the first major stress test of this new regime. We would like to focus in this paper on a central pillar of the regime – the debt of American households – in order to draw some meaningful insights into the nature and implications of the current crisis.

1. From “Debt Economy” to “Finance-Led Capitalism”

Following the collapse of the gold standard and America’s banking system in the early 1930s, Roosevelt’s New Deal (1933-35) introduced monetary reforms – notably the Glass-Steagall Act of 1933 and the Bank Act of 1935 - which provided America’s economy with an elastic currency and safe banking system. The new system became a pillar of the post-war boom. By allowing for money creation in acts of credit extension, the banking system was put into a position to finance rapid economic growth. Some of that funding took the form of bank loans. In addition, banks helped debtors more indirectly by buying up their bonds – whether Treasury securities, municipal bonds, or corporate bonds. Notwithstanding those two alternative funding channels, we can characterize such continuous debt-financing of excess spending (and its automatic monetization) by the banking system as a debt economy.\(^{(1)}\)

We need to distinguish here our notion of debt economy from the French semantic equivalent referring to the so-called économie d’endettement. During the post-war boom known in France as the “trente glorieuses” (1944 – 1974), bank-based financial systems were a major pillar of economic development in continental Europe. The close relationships between banks and industrial firms, called the « banque-industrie » connection, is considered to have been one of a major factor underlying fast economic growth in European economies.
Public policies also played an active role in shaping financial systems in Europe. In Germany, as well as in France, national or regional state-owned banks were major actors in their respective national economies. Regulations were important for controlling the distribution of bank loans and the rates of interest. Foreign-exchange transactions were also under strict control (contrôle des changes) until the late 1980s. Deregulation took place with the construction of the European single market for financial services in the early 1990s.

Returning to our post-war debt economy, that system’s ability to generate steady supplies of cheap credit helped governments run chronic budget deficits and firms adopt mass-production technologies. The international extension of the debt economy, put in place at the Bretton Woods Conference in 1944, enabled other industrial nations to catch up with the United States through a systematic transfer of capital from the latter to the former during the 1950s and 1960s. Bretton Woods’ fixed exchange rates complemented a domestic bias in favor of low interest rates, hence offering a growth-promoting combination of money’s prices.

Stimulative Keynesian macro-economic policies could thrive in such a monetary regime, either by fostering higher government spending, lowering taxes, boosting business investment spending, or a combination thereof. Both public and private sector were given ample funds to sustain gradually rising debt levels in support of accelerating spending. In such a favorable environment it did not take long for the “debt economy” to extend its reach to household consumption, which is the largest spending component of the economy and typically absorbs two-thirds of aggregate demand in industrial nations. As can be seen from Graph 1, the booming 1950s and 1960s saw rising household debt and corporate debt ratios. Enjoying a steadily declining public debt burden due to much smaller budget deficits following the conversion to a peace economy, the private sector’s growing use of debt still left the aggregate debt/income ratio stable in a fast-growth environment. Still, as the data shows, the household debt rose from a ratio of 0.37 in 1947 to the upper 0.80s in the late 1960s and so demonstrated its importance for growth early on.
1.1. Stagflation and the Neo-Liberal Policy Revolution: This rosy scenario soured after 1969 when the U.S. economy began to experience a decade of much slower growth and accelerating inflation. That combination, known as *stagflation*, fuelled a sort of debt-inflation spiral and necessitated extensive regulatory changes pertaining to money and banking in order to bring inflationary pressures finally under control in the early 1980s – notably a movement toward floating exchange rates after 1973 and the deregulation of interest rates after 1979.\(^{(2)}\) These changes in the determination of money’s prices were only the first steps in a broader deregulation of banking, first in the US (via Depository Institutions Deregulation and Monetary Control Act of 1980, Depository Institutions Act of 1982, and finally Financial Services Modernization Act of 1999) and then also in EU (via Second Banking Directive of 1989). Coupled with a switch in monetary policy to a Monetarist emphasis on price stability, governments of the US and EU made a conscious decision to change the power relations within the credit system from a pro-debtor bias to a pro-creditor bias. At the same time these reforms pertaining to money and banking imposed a painful disinflation on overextended debtors. The crucial vector of this shift, record-high “real” (i.e. inflation-adjusted) interest rates for over a decade, fostered industrial restructuring on a major scale. High interest rates forced businesses into more prudent investment decisions, shortened their investment horizon (which ultimately encouraged their emphasis on high technology and financial-asset
accumulation), encouraged centralized cash management, and put more pressure on keeping labor costs under control. Institutional changes in the modalities of wage determination, which succeeded in weakening trade unions, collective bargaining procedures, and labor law restrictions on hiring and firing, made it easier for businesses to regain power over labor costs and slow the pace of salary increases. Once these reorganization efforts had the desired effect of eliminating inflationary pressures, interest rates were allowed to come down (in early 1990s) and stay low for nearly 15 years (see Graph 2 below).

Graph 2: US Interest Rates

![Graph 2: US Interest Rates](source)

SOURCE: Council of Economic Advisors (2008)

These post-crisis changes left in place conditions that ultimately would permit revival (and eventual extension) of America’s debt economy at an even more aggressive pace. Freed from burdensome regulatory constraints, U.S. banks gained the ability to set more favorable lending terms, speed up financial innovation, and dramatically widen the range of fund suppliers. Their deregulation ultimately fostered the integration of commercial-banking (i.e. deposit-taking, loan-making) activities and investment-banking (i.e. market-making) activities into a much more complex web of intertwined financial transactions and
contracts. At the center of this web are the world’s leading transnational banks which over the last decade have morphed into multi-faceted financial groups combining the entire array of financial activities and services (e.g. commercial banking, investment banking, fund management, insurance). In contrast to the old-style “universal banks” so dominant in post-war France or Germany, today’s financial groups aim to promote financial markets as sources of income gains rather than impede their development in favor of traditional commercial-banking functions. Having had the advantage of earlier deregulation and of more practice in combining different functions of finance, European banks were for a while ahead of their American counterparts in this transformation of banking.

1.2. Finance-Led Capitalism and its Underlying Forces: These financial groups are at the center of a qualitatively new type of economic system which heterodox economists, in particular France’s Régulationists and America’s Radical Political Economists, have referred to as finance-led capitalism. Different characteristics of this new regime have been emphasized. One stresses the dominance of financial motives, especially that of shareholder value maximization as the primary objective of the enterprise and basic principle of corporate governance (Krippner, 2004; Plihon, 2004). Related to this is an emphasis on the strategic position of financial investors, a resurgent class of rentiers newly propelled to dominance in a sort of “patrimonial capitalism” (Aglietta, 1998), and on their ability to claim a larger portion of national income for themselves through a variety of capital income sources, such as interest, dividends, service fees and commissions, and capital gains (Epstein, 2004).

Increasingly, heterodox economists are using the term “financialization” to denote the different dimensions of finance’s growing importance and the macro-economic implications of this trend (Stockhammer, 2007), often argued via its restraining effects on distribution and growth (Stockhammer, 2004; Hein & Van Treer, 2007).

Financialization has been a global process initiated first in the US and UK during the late 1970s from where it spread at different paces to other major industrial countries. Deregulation, globalization and financial innovations played a major role in this global convergence process toward finance-led capitalism. France was certainly one of the European countries where changes were the most profound and rapid. Privatizations and financial reforms conducted by successive governments (including the socialist ones) since the mid 1980s led to a fast transition from state capitalism to France’s insertion in finance-led global capitalism. The largest French banks and firms are owned by institutional investors, most of
which are foreign (US) investors. What we see here is an interesting dialectic between continued heterogeneity yielding a variety of different capitalisms (Amable, 2005) and systemic convergence across the globe brought about by deregulation and the increasingly dominant role of finance.

Whatever the specific characterizations of finance-led capitalism, we can agree that the new regime puts financial motives, instruments, and markets at the center of its growth process. But how did we end up allowing the pursuit of pecuniary gain to be channeled so much through financial channels rather than through trade or manufacture? There are, in our opinion, three inter-related forces behind this fundamental change in the modus operandi of capitalism – increased reliance on debt across the entire range of economic activities, the facilitation of such debt-financing by financial innovation, and financial globalization as the most transcendental force in the internationalization of capital.

It stands to reason that contemporary capitalism is finance-led, because it is to an unprecedented degree driven by an ever-growing community of financial investors supplying funds to debtors seeking to accelerate their growth by means of additional debt. Signaling access to funds belonging to others, debt enables its users to separate spending from income and hence operate on a larger scale than would otherwise be the case. Our growing reliance on debt-financing is greatly facilitated by an accelerating pace of financial innovation. Less technologically bound than industrial innovation, financial innovation depends more on the ability of humans to design new promises, then turn those into legally enforceable claims for a portion of someone else’s future income, and finally organize markets in which those claims can be traded for gain. That kind of (design and fund-raising) activity has low sunk costs, but can for the same reason also be easily copied by others. Its relatively short life cycle makes for both a fast pace and a bias towards customization to render such innovations in the credit system less easily copied, as we see especially manifest today in structured-finance products or private wealth management. Key financial innovations, notably derivatives (e.g. futures, options) and securitization products (e.g. mortgage-backed securities, collateralized debt obligations), have led us to engage ten, a dozen, perhaps as much as fifteen dollars in purely financial transactions for every single dollar of trade and production that they back. Such multiplication of commitments accommodates an equally impressive widening of the investor community, a result of more actors accumulating wealth and also testimony to the irresistible attractiveness of financial income sources that are easier to come by than industrial profit,
rent, or other income drawn from ownership of capital. The propagation of financial investors
and markets is a global affair. Relative to plant and equipment used as means of production or
labor, it is much easier to move money across borders. Financial capital is thus inherently the
most mobile form of capital, especially once a large part of its fund-transfer and claims-
trading activities will have moved online into cyberspace. Today’s increasingly transnational
organization of financial institutions and markets is the spearhead of the broader globalization
process that has already fundamentally reshaped our economic system.

2. The Macro-Dynamics of Debt Financing

Finance-led capitalism has its own accumulation dynamic, its own growth pattern. Normally
we use the Keynesian aggregate-demand and –supply framework, especially its IS/LM
variant, to provide a multi-sectoral framework for the uses and sources of funds as is indeed
the case with the Fed’s flow-of-funds analysis. Post-Keynesians working together in the Levy
Institute, such as Godley (2002), Godley, Izurieta, & Zezza (2004), or Godley, Papadimitriou,
Hannsgen & Zezza (2007), have recently refined this framework to highlight the key macro-
economic (im)balances serving as the pillars of our modern “debt economy.” Their argument
is as follows:

The real (inflation adjusted) national income $Y$, is defined as:

$$ Y = X - M + G + A \quad (1) $$

Assuming all variables to be deflated flows, $G$ denotes government expenditure, $X$ exports
plus property income and foreign transfers, and $M$ imports. Comprising consumption $C$ and
business investment $I$, variable $A$ stands for absorption, meaning total private expenditure.
Subtracting $T$, defined as government taxes and transfer payments, from both sides and
rearranging, we have:

$$ Y - T = (X - M) + (G - T) + A \quad (2) $$

Or  $$ 0 = (X - M) + (G - T) + (Y - A) \quad (3) $$
Equation (1) describes the three major balances at the macroeconomic levels, i.e. the government fiscal balance \((G - T)\), the external (current account) balance \((X - M)\), and private net saving \((Y - A)\).

Though in themselves no more than accounting equalities, these equations carry important implications. Equation (3) says that the current account surplus is identically equal to the government budget balance plus private net saving. Each balance implies an equivalent change in a stock variable. For instance, a current account deficit implies a change in the stock of overseas assets whereas a budget deficit implies a change in the stock of government debt and the private balance implies a change in net private wealth.

Analysis of net saving by the private sector as a whole requires that the total be disaggregated into the personal and the business sectors because the two often behave quite differently from one another. Disaggregation of the private sector leads to:

\[
0 = (X - M) + (G - T) + (Yh - C) + (Yb - I)
\]

where \(Yh\) measures household disposable income and \(Yb\) business sector income as \(Y = Yh + Yb\), rendering so \((Yh - C)\) to be personal net saving and \((Yb - I)\) to be business sector net saving. Personal net saving implies a change in the stock of net household wealth, and business sector net saving goes with a change in the stock of net business sector wealth.

Each of these four sectoral balances represents an outflow out of the circulation of the domestic economy (“leakage”), matched by an inflow (“injection”) into that circulation. By measuring its respective sector’s arterial (in and out-)flows of expenditure into the economy and from it, each balance measures that sector’s effect on aggregate demand. In a symmetric way, each balance is measuring the financial flows into and out of the economy by one sector, to help clarify how the latter affects aggregate wealth in the economy. Inequalities between those paired in- and outflows define whether this particular sector contributes to net savings or, running a spending deficit, has to draw from available sources of funds in other sectors. If, for instance, the country in question has a positive private savings balance, it can afford to run a proportionately large budget deficit and/or run a current-account surplus that will turn it into a capital exporter to the rest of the world. Alternatively, the model by Godley et alii enables us to specify what must happen in the rest of the economy adjusting to a change in the balance.
of one sector. If, for instance, our country runs down its personal net savings, it will either have to boost net saving in the business sector (perhaps via a recession-induced decline in business investment), cut its budget deficit proportionately, boost its capital imports (via a larger current-account deficit), or undertake adjustments consisting of more than one of these responses.

While already useful in identifying a national economy’s key macro-economic drivers underlying its particular growth pattern, the type of analysis presented here is still essentially a comparative-static framework of analysis. It measures the prevailing constellation of (im)balances at two (separate and frozen) points in time without telling us how exactly we got from there to here, from then to now. Although the four balances above must always exactly sum to zero and so feed each other in entirely inter-dependent fashion, each of them is more than a residual of the other three. Each balance has a life of its own. When one balance changes, it brings about the required equivalence with the other three balances so that they all still cancel out by forcing prescribed changes in the level of such macroeconomic variables as real output, prices, interest rates, and exchange rates. Ever since the path-breaking work of Godley and Lavoie (2006) has provided us with a complete set of stock flow consistent (SFC) models, we can now trace an economy’s growth pattern over time. In that model the financial balances of each sector have exact counterparts in changes in stock variables, so that asset and liability stocks provide the link between various periods for the precise tracing of historic time. An added advantage of the Godley-Lavoie model is that it includes the financial sector’s flows with other sectors and its stocks of assets and liabilities, thereby accounting for the credit system as an active force in shaping our economy’s growth pattern.

3. The Emerging Centrality of Consumer Debt

When looking at the four “macro-drivers” of the post-Keynesian models we can see that all of them have over the last decades enjoyed greater access to debt financing.

3.1. Government Debt in the Context of the Neo-liberal Policy Revolution: For instance, governments have run up chronic budget deficits \( G > T \) everywhere. That excess spending gets typically financed by issuing Treasury bonds a portion of which gets bought by the
domestic banking system for partial monetization of that debt. While deficit-spending by the government adds a stabilizing stimulus to the economy and funds many socially useful activities that cannot be taken care of adequately by the profit-driven market economy (e.g. infrastructure investment, education, income maintenance for people without regular market income), excessive public debt - and continuously high levels of its monetization – can feed inflationary pressures. Economies with chronically high budget deficits suffered grave fiscal crises during the 80s and early 90s, when real interest rates at levels persistently above growth rates intensified the compounding burden of previously accumulated public debts. In the G7 major industrial countries, the government debt ratio measured as a percentage of GDP rose sharply from 20.5% in 1980 to 30.8% in 1990 and 41.9% in 1995. That squeeze threatened budget deficits to get out of hand thanks to rapidly rising debt-servicing charges pushing up government expenses, and that threat was a major reason why governments eventually had to cut social spending in recent years below projected levels. This was especially true in the United States during Clinton’s pay-as-you-go spending limits in the 1990s. In the European Union the pressure for fiscal discipline was perhaps even more stringent, thanks to the more restricted monetization ability of the European Central Bank (compared to America’s Fed) and the limits on budget deficits and public-debt levels imposed by the so-called Stability and Growth Pact on the 15 countries participating in the €-zone. Governments in emerging market economies, deprived for the most part since their big crisis of 1997-9 from relying on domestic bank loans which until then had been under their political control, see their specific deficit-spending limit nowadays set by their acceptance in international bond markets on which they have come to rely.

3.2. Corporate Debt in the US and EU: Corporate debt has also had ample opportunity to expand steadily, whether to fund working-capital expenses during periods of cash-flow gaps on a short-term basis or take on long-term debt for large-scale investments in production capacity. Smaller- and medium-sized businesses, neither able to issue bonds nor equity shares, depend entirely on bank loans for external funding. A much more active market for initial public offerings (IPOs) and the successful launch of a large market for high-yield bonds have over the last 15 years greatly increased the number of firms able to funds themselves through issue of securities and become less dependent on commercial loans from banks. European firms have over that same period dramatically increased their issue of corporate bonds, one of the positive repercussions of the €’s rapidly increasing international role and gradual creation of a single financial space across the European Union in the wake of the
Single European Act of 1987. In the 1990s, and even more so during the 2002-07 recovery, the US and EU corporate sectors have both enjoyed the fruits of their far-reaching corporate-restructuring efforts during the preceding decade, earning consistently higher profit-rates and managing dramatically improved rates of self-financing. Where the large firms continue to take on a lot of new debt is for financial-market engagements (e.g. stock buy-backs) and improved corporate control (mergers, acquisitions, hostile take-over bids, partnerships).

3.3. Consumer Debt and Wage Stagnation: Of course, the increase in production capacity, which firms can fund beyond earnings through bank loans, corporate bonds, and new equity shares, has to be accompanied by proportionate increases in demand on the other side of the market equation. While those can come about from business spending itself or government spending, we are more likely – especially when looking at this in the aggregate – to get these demand-side boosts from household consumption (which in most economies marks by far the largest component of demand, a staggering 72% of total GDP in the United States). But during the last three decades we have seen stubborn wage stagnation in the industrial nations. That trend first appeared in the 1970s when industrial wages could not keep pace with accelerating inflation, then intensified during the extensive corporate restructuring of the 1980s, and finally extended even further with the sudden entry of 3 billion new humans into the world economy following the collapse of communism in 1991. The concomitant erosion of labor’s income share in most industrial nations (see Graph 3), further compounded by widening inequality between a minority of globalization winners and majority of globalization losers, threatens domestic economic stability by fostering the possibility of overproduction conditions necessitating recessionary adjustments (to restore the balance between supply and demand).

Many countries, especially the emerging-market economies and such traditional industrial power-houses as Japan or South Korea, have been able to escape such an imbalance by launching export-led growth strategies, often fuelled by keeping the domestic currency undervalued through active exchange-rate management. Obviously not everyone can run current-account surpluses (X > M). Some countries must absorb all those products from surplus countries by running deficits in their trade balance. Consumers in those countries can, of course, contribute to such absorption even in the wake of stagnant wage incomes by saving less and/or working more (as has happened with the United States especially and, to a lesser extent, also in Europe). In the end, however, either of these responses has its physical limits.
In that context the facilitation of adequate household spending in the face of stagnant income is more effectively assured by access to consumer debt whereby household spending can be decoupled within limits from consumer income.

**Graph 3 : Declining Income Share of Labor in Major Industrial Economies**

We see this trend play out in all major advanced capitalist economies. Everywhere in the industrialized world we see a correlation between stagnant, even falling wage shares and rising use of consumer debt over the last couple of decades. We suspect that there may even be a symbiotic relationship between the two in the sense that thereby debt-boosted consumption levels stayed high enough and thus helped boost growth of domestic GDP sufficiently to sustain in turn the growing use of debt by households over a long period of time. Table 1 shows the rise in consumer debt as a percentage of disposable income in the United States and France between 1975 and 2006. In both cases that ratio doubled, albeit at twice the level across the Atlantic.
Table 1: Household debt as % of disposable income

<table>
<thead>
<tr>
<th></th>
<th>1975</th>
<th>2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>62</td>
<td>127</td>
</tr>
<tr>
<td>France</td>
<td>33</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: OECD

Those findings are further confirmed in Graphs 4a and 4b below which depict rising consumer debt levels in all industrial nations listed while at the same time pointing to the comparatively high level of household indebtedness in the United States (ECB, 2007b). This begs the question why American families have taken on significantly higher levels of debt than their counterparts, say, in France, Germany or Japan.

Graph 4a: Household Debt Ratio in the Euro Area

![Graph 4a: Household Debt Ratio in the Euro Area](chart.png)
One way to answer this question is to point to a constellation of institutional complementarities in the United States, which together have created that bias in favor of higher levels of indebtedness among Americans. For one, there is a national consensus, rapidly adopted even by the most recent immigrant wishing to integrate, of pursuing the American Dream which, for all practical purposes, translates into enjoying home ownership and a rising capacity to spend. A powerfully entrenched get-rich-quick mentality, barely restrained by organized religion and/or anti-capitalist traditions found elsewhere, allows the rich to set the social norms of consumption for the rest of America. Ideological preferences in favor of small government have also led Americans to entrust certain necessities, which in the rest of the world are provided as public goods by the government itself, to market regulation and hence end up paying a lot for those - education, health, transportation, et cetera. Much of this is financed by debt, such as student loans or car loans. These widely available channels of specialized loans are one expression of a highly developed system of consumer debt. This popular segment of the U.S. credit system, pushed aggressively by commercial banks and more specialized lenders (e.g. credit unions, finance companies) in a very competitive environment, has been supported for many decades now by the U.S. government with a combination of tax breaks, regulatory relief, and government-sponsored concessionary lenders assigned to promote their segment of consumer debt (e.g. Fannie Mae and Freddie Mac for mortgages, Sally Mae for student loans). In the end the U.S. has built a whole economy around consumer debt, including credit bureaus evaluating the creditworthiness of every American household, debt counselors, collection agencies, and financial advisors.
Americans have increasingly matched their proclivity for debt with a low regard for saving, the exact opposite preference profile from that of most Europeans and East Asians.

4. Financial Innovations and the U.S. Housing Bubble

The trend towards higher levels of debt is fuelled by lenders finding new ways to entice more borrowing and the funding thereof. Financial innovation, as we have already mentioned in section 1, is a crucial aspect of finance-led capitalism. An endogenous force within any credit system, it is initiated by financial institutions responding to specific constraints for which they seek new escapes and solutions. A lot of innovations are aimed, for instance, at bypassing regulatory restrictions or other types of institutional barriers to the growth of financial transactions. And most of this activity ends up facilitating the banks’ extension of credit.

These general comments apply, of course, also to consumer finance. Take, for example, the introduction of several new short-term sources of bank funds in the early 1960s, such as negotiable certificates of deposits (i.e. corporate deposit accounts that can be resold to others), Federal funds (i.e. an inter-bank market in bank reserves), commercial paper (i.e. short-term bonds issues by the parent companies of banks), or Eurodollar deposits (i.e. $-denominated time deposits held outside the US). Those so-called borrowed liabilities made banks less dependent on their traditional deposit base for funding of loans and so expanded their lending capacity much more aggressively than had been hitherto the case.

4.1. Mortgage Innovation: Another wave of financial innovation, triggered by the deregulation of banks to let them compete more effectively with less regulated non-bank rivals (e.g. money-market funds, Eurocurrency deposits, finance companies, thrifts), made it possible for banks to offer a whole new generation of deposit types (e.g. NOW accounts, consumer CDs, money-market deposit accounts) while also greatly revamping their portfolio of loan products. Following the Deposit Institutions Deregulation and Monetary Control Act (DIDMCA) of 1980 and the Depository Institutions Act of 1982 (DIA), U.S. banks began to introduce adjustable-rate mortgages where the price risk would be borne by the borrower rather than the lender. To make these more appealing,
banks would charge artificially low interest rates at the beginning of the loan contract that would be reset to higher levels later. From there it was only a small step toward “balloon” mortgages, which postponed most of the debt-servicing charges until much later, or “negative-amortization” loans where a portion of the interest payments would be added on to the principal rather than be paid concurrently.

The increased pace of mortgage-related innovation led banks in the mid-1990s to make two crucial changes in their home-loan practices. With interest rates finally coming down from their high levels of the 1980s, bankers made it easier and cheaper to refinance. Millions of American home-owners were given a chance to replace an old mortgage before maturity with one carrying lower interest rates and, corresponding to the increased value of the home serving as underlying collateral, also a larger principal. The other change concerned the introduction of home-equity loans, a kind of second mortgages that could be used for any spending purpose while still affording borrowers the advantage of tax-deductible interest payments. Both of these innovations made it possible for American home-owners to cash in on the appreciation of their home equity. The beginning of the housing boom in the mid-1990s provided an extra stimulus for household consumption which pushed the U.S. economy onto a higher growth path for years to come.\(^{(5)}\)

4.2. Securitization: The rapid spread of re-financings and home-equity loans resulted from a massive shift in the supplies of funds towards real-estate investments as yet another key financial innovation came to revolutionize the funding of American home ownership in the early 1990s. The innovation we are referring to here is the securitization of loans, in particular the issue of mortgage-backed securities. Those MBS are created when similar types of mortgages are pooled together and used as collateral for the issuance of securities. Investors in those securities receive payments of principal and interest of the underlying loans in the pool which are “passed through,” minus payment of servicing and guaranty fees. Such repackaging of mortgage loans into marketable securities allowed banks to recuperate loaned-out funds quickly for additional lending rather than be stuck with an illiquid loan asset for many years. The much-accelerated turnover made it possible for banks to increase their lending volume greatly while transferring default risks to investors and earn a whole lot of fees associated with
securitization. Initially launched already in the early 1980s by government-sponsored entities (GSE) like Freddie Mac, Fannie Mae and Ginnie Mae, it took a while for this new financial product to catch on. By the mid-1990s, however, MSB started to attract a much larger community of investors because of their relatively high yields in a low-interest environment, especially when considering a widespread perception of their low risk because of their implicit government backing.(6) While total annual MSB issues averaged about $500 billion during the 1990s, that average tripled after 2002 to $1500 billion – a figure implying the securitization of about 80% of all new U.S. mortgages over the last five years.

4.3. Home Equity Withdrawals: Combined with the Fed keeping interest rates very low in the early 2000s, ample funding provided by mortgage securitization set off a major housing boom in the United States. As the boom took hold after 2002, re-financings and home-equity loans enabled U.S. homeowners to borrow against the soaring values of their homes and so boost their spending capacity considerably. Amounting to 9% of disposable income and averaging $840 billion p.a. at the peak, such home-equity withdrawals increased consumption by 3% p.a. in the 2002-05 period, equivalent to an annual spending boost of about $300bn., compared to 1.1% p.a. during the 1990s (Greenspan & Kennedy, 2005).

Eager to expand markets, lenders accelerated the boom after 2004 by pushing new mortgage products, such as piggy-backs covering downpayment requirement (for effective 0% self-financing), Alt-A loans carrying higher rates in return for relaxing income verification and other requirements for proof of creditworthiness, and subprimes to borrowers with troubled credit histories. These non-traditional loans were attractive, since they carried much higher rates and earned loan officers also higher commissions. Banks, now much more heavily involved in loan securitization themselves and issuing after 2004 more than half of all new MSB, bundled these non-traditional mortgage products (including so-called “jumbo” mortgages too big for FHA insurance) into high-yielding loan-pool combinations whose securitization would still earn investment-grade ratings and so prove irresistible to investors. Such high-yielding “non-agency” MSB issued by the banks were also gobbled up by foreign investors, up to $500bn. in 2005 alone.(7)
5. The US-led Global Growth Dynamic and Global Imbalances

What we see here unfold is a consumer-led growth pattern in the United States where household consumption has recently made up an astounding 72% of GDP, far higher than elsewhere. With America’s share of wages and salaries hovering in the 65%-68% range throughout the 1990s and 2000s, such proportionately high consumption levels necessitated sharp declines in America’s personal savings rate (from an average 8% of disposable income at the beginning of this period to a negative 2% fifteen years later, in 2006) as well as increasing reliance on consumer debt. The latter experienced a significant boost when American homeowners were allowed to borrow massively and cheaply against their rapidly rising housing capital. Home-equity withdrawals provided more than half of America’s nominal GDP growth during the post-2001 recovery. The ability to boost debt-financed consumption in line with rising housing prices makes it less urgent to save. We can observe a steady decline in household net saving in the US since the early 1980s. Our hypothesis is that there is a close connection between the rise in US current account deficit and the fall in domestic net savings in the household sector, as seen in Graphs 5a and 5b.

Graph 5: Households Net Savings and Current Account Imbalances
While both government and the corporate sectors may also contribute to the overall decline in domestic saving, their role seems to have been less predominant in the long run. Empirical evidence suggests that the link between household net saving and current account balance, most likely mediated through the evolution of asset prices (in particular housing), is in fact not limited to the US and prevails in several other OECD countries (ECB, 2007a).

The boost in US consumption from the housing boom carried major spillover effects to the rest of the world. Going back to the model of Godley et alii discussed in section 2, the U.S. economy, finding itself once again with significant budget deficits after 2001, had to compensate for a growing imbalance in private net saving (Yh – C) with a relentlessly rising deficit in net exports (X < M) which by 2006 had grown to over $800bn. or 7% of GDP. In other words, the United States spends collectively 7% more than it earns in any given period of time, with that gap being largely financed by imports of capital from countries running chronic current-account surpluses, notably the oil-exporting nations of OPEC, Japan, and the emerging-market economies (EMEs) of, above all, Asia (i.e. China, India). The recycling of these surpluses has occurred more or less automatically over the last decade to the extent that those countries have pegged their undervalued currencies to the dollar which obliges them to buy up dollar-denominated assets (in the process of selling their own currencies) when defending their pegs against surplus-induced currency-appreciation pressures.

5.1. The US-Dollar as World Money: Surplus countries – a collection of commodity producers, emerging-market economies, and industrial nations (see Graph 6) - have thus been able to pursue export-led growth strategies, rooted in consciously undervalued currencies, and sustain those by lending their surpluses to the one country willing and able to act as the world’s “consumer of the last resort.” The United States, in turn, has been able to live consistently beyond its means with the help of the surplus nations’ savings, thereby ending up absorbing 75% of the world’s aggregate trade imbalances. It should be noted that this symbiotic relationship underlying the global growth dynamic of the last couple of decades has been supported by a crucial asymmetry in the world economy stemming from the use of the leading power’s national currency as international money in cross-border transactions. That money, since 1945 the U.S. dollar, is created within the leading country’s banking system and gets transferred by continuous net outflows from
the country of issue to the rest of the world. In other words, the creation of international liquidity rests on chronic balance-of-payments deficits of the United States which other countries automatically finance to the extent that they hold $-reserves or use dollars in international circulation. The United States, to put that same advantage in different terms, is the only country capable of borrowing from abroad in its currency and of doing so indefinitely. It can therefore accumulate larger foreign debts without feeling the same kind of debt-servicing burden and in this fashion pursue much more stimulative economic policies for far longer than other countries would be able to. This relaxation of its external constraint has allowed the United States to run up huge current-account deficits, have those automatically financed at low cost by the surplus countries, and live with a negative savings rate even though it is the richest country in the world.

Graph 6: Current Account Imbalances in Selected Countries and Regions

Source: ECB
5.2. Bernanke’s Savings Glut: Ignoring America’s privileged position in the world economy and the use it has made of that advantage, current Fed Chair Bernanke (2005) has put the responsibility for the widening of current account imbalances squarely on the side of developing countries. He argues that the financial crises of the 1980s and 1990s caused capital flows to reverse, flowing now from developing to industrialized countries. In particular, EMEs, especially those in Asia, have built up exchange reserves to safeguard against potential future capital outflows (see graph 7).

Graph 7: International Reserve Assets

Figure 1: Reserve Assets
Excluding gold, per cent of GDP

Notes: (a) Hong Kong, Indonesia, Malaysia, the Philippines, Singapore, South Korea, Thailand and Vietnam. (b) Algeria, Iran, Kuwait, Mexico, Nigeria, Norway, Russia, Saudi Arabia, the United Arab Emirates and Venezuela.

Sources: IMF, IFS, WEO, World Bank, WDI

In doing so, government of these nations have ended up channelling domestic saving into international capital markets. Summers (2006), who was chief economist of the World Bank before serving as Treasury Secretary under Clinton, noted in the same vein that reserves in developing countries had reached a level “far in excess of any previously enunciated criterion of reserves needed for financial protection.” According to Bernanke, this excess saving exerted a downward pressure on real interest rates, stimulating borrowing and consequently
asset prices inflation in developed economies. While it is certainly true that the EMEs’ pegging of undervalued currencies led them to fund America’s burgeoning current-account deficit on a growing scale, this “savings glut” hypothesis of Bernanke, Summers and other influential American economists conveniently absolves the United States from any responsibility for the accumulation of large global imbalances. Even worse, that argument ignores entirely the monumental seigniorage advantage accruing to the United States as issuer of world money.

5.3. Bretton Woods II?: A more balanced discussion of current global imbalances has been put forward by those, such as M. Bordo & M. Flandreau (2001) or M. Dooley, D. Folkerts-Landau & P. Garber (2003), who characterize the current configuration as Bretton Woods II. Today, as was the case with the post-war fixed-rate system from the late 1950s to the early 1970s, the periphery once again seeks to maintain undervalued currencies at fixed rates for export-led growth and in the process ends up supporting the core’s external deficit. This historical analogy has been more recently criticized by Eichengreen (2007) who points to the important difference of the US running current-account surpluses during Bretton Woods while facing large current-account deficits today. According to him, that deficit is entirely due to how the dollar standard operates today, thus putting the United States at the active center of the world economy and fully responsible for its imbalances. His timely analysis ends with the pertinent question whether those symbiotic imbalances can persist indefinitely and, if not, which would be the most likely adjustment scenarios.\(^{8}\)

Any eventual adjustment process in the rebalancing of the world economy would require a steady, significant improvement in U.S. net exports over the next five years. Since Nixon’s suspension of Bretton Woods in 1971 successive U.S. governments have proven willing to let the US-dollar depreciate in order to boost its net exports (by rendering US exports cheaper abroad and imports into the United States more expensive for Americans). The problem with this type of adjustment is that, with price movements faster than volume changes, any depreciation raises initially the import bill and so makes the trade deficit worse before it gets better (the so-called \textit{J-curve}). Apart from the delayed reaction, there is also the problem, already violently manifest once in October 1979, of an
excessively large dollar depreciation becoming self-feeding to the point of acutely endangering the world-money status of the US-dollar – especially now that it has with the emergence of the euro in 2002 for the first time a serious rival. Such a crisis may make it impossible for the United States to cover its twin deficits or at least require much higher U.S. interest rates to keep foreign investors attracted.

The United States has certainly still some inherent strengths to avoid such a potentially disastrous outcome. It is after all still the largest economy of the world, and in that context both very flexible and competitive to boot. The significant dollar-depreciation of the last couple of years has also rendered its products very price-competitive in global markets. It would be better, of course, if more of that currency-price realignment would also involve the pegged Asian currencies in need of significant revaluation (yuan, yen, won, Saudi riyal, etc.), followed by encouragement of higher levels of domestic consumption in those emerging-market economies. In addition, the U.S. economy possesses two additional comparative advantages which prevent its current-account deficits from spinning out of control. One is the strong U.S. presence in most service sectors, to the point of running chronic surpluses in that balance-of-payment item, at a time when trade in services is exploding. And the other is the fact that, despite having run up a very large foreign debt in excess of $3000bn. during the last couple of decades, net investment income in the U.S. current account is essentially balanced which implies much higher rates of return for U.S. investments abroad than earned by foreigners on their investments in the United States.\(^9\)

6. The Global Credit Crunch Starting In 2007

Since the United States has not had to face an external constraint like anyone else and EMEs have no interest in letting their currencies appreciate much or slow down the torrid pace of their expansion otherwise, global imbalances have been allowed to persist and grow to the point of triggering acute conditions of global crisis. Following a two-year period of persistent tightening by the Fed (i.e. seventeen consecutive interest-hikes) in 2004-06, the U.S. housing bubble burst during the second half of 2006 when home sales, construction, and even prices all started to tumble. At that point non-traditional mortgages, especially subprimes, began to see their initially low “teaser rates” (of 1.5% to 3%) reset to much higher levels (usually between 10% and 15%, but in some cases rising to 18%) which immediately caused many of
those higher-risk borrowers to face serious debt-servicing problems. In the spring of 2007 it became clear that up to a third of all subprime mortgages might end up in default once scheduled interest-rate resets would have been completed by mid-2009, triggering in the process perhaps as much as 5 million foreclosures and thereby assuring a continuously deepening real-estate downturn bound to last over two years. This stark realization put into question the investment-grade ratings of many MSB containing subprimes in their pools. As a result ratings agencies, under pressure to acknowledge their mistake, began to downgrade a lot of MSB below investment-grade level which disqualified them from being bought or held by mutual funds or pension funds.

6.1. The Subprime Crisis: In August 2007 this deteriorating situation exploded suddenly into a full-blown global credit crunch. Once the spike of subprime defaults began to spill over into the market for MSB, it spread panicky fear to several other securitization layers. The next market to collapse was that of collateralized debt obligations (CDOs) which bundle different kinds of debt together, including corporate bonds, mortgage-backed securities, and credit-card debt. A number of investors heavily engaged in the now-paralyzed CDO market, notably hedge funds, private-equity funds, structured investment vehicles, and other bank-run special-purpose entities that had been kept off the books, suddenly found that they no longer had recourse to short-term funds mobilized via issue of asset-backed commercial paper (ABCP), the third securitization layer to collapse in the fall of 2007. This forced them to draw massively on emergency bank loans put aside for precisely such eventualities. The sudden hike in demand for such funds put a lot of pressure on the inter-bank market which banks, now suddenly fearful of what losses laid ahead, were not willing and able to respond to meaningfully. As even the shortest-term (“overnight”) inter-bank rates shot far above central bank targets once demand for funds started to outpace supply of funds consistently, the world’s leading central banks had to step in repeatedly with huge liquidity injections to prevent the inter-bank market, the nerve center of the global economy, from becoming paralyzed.

6.2. Global Credit Crunch: We are now in the midst of an unprecedented global credit crunch. The coordinated and unprecedented lender-of-last-resort interventions of the ECB, the Fed, the Bank of England and other monetary authorities have so far prevented the inter-bank market from seizing up. But such assistance does nothing to revive an alternative banking system, built on several inter-dependent layers of securitization, which has collapsed. Banks
face hundreds of billions of dollars in write-down losses over the next couple of years, some of which they have already started to acknowledge. And that huge hit to their bottom line and capitalization levels will make them far less willing and able to lend at adequate levels. Worst hit is the United States, where the housing crisis and slow-motion credit crunch are feeding each other to drive the domestic economy into recession. Of course, given the dominant role of Americans as ‘consumers of the last resort,’ any slow-down in the U.S. economy is going to hurt many other regions as well. It may be possible that EMEs manage to rely more on home-grown markets fed by higher levels of domestic consumption or that they trade more among themselves. It may also be that the European Union is ready to act more as locomotive of the world economy as it challenges the United States for economic-superpower status. Even if these or other rebalancing forces help avert the worst, they cannot unfold rapidly enough to counteract the fast-moving ripple effects from the burst of America’s housing bubble or the collapse of securitization. The adjustment process needed to correct global imbalances will now be imposed rather brutally by a global credit crunch sharply curtailing America’s capacity for excess consumption.

7. Capitalism from Crisis to Crisis

The contemporary process of financial globalization has known three distinct phases over the last three decades. Each of these was fuelled by major financial innovations and ended in grave crisis. The first phase, which began in the 1960s and intensified during the 1970s, was that of the Eurocurrency market. It ended with the LDC debt crisis of 1982-89 during which over fifty developing countries faced de-facto defaults on their sovereign loans from that market. The second phase was triggered by the generalization of financial liberalization across the globe, from North to South, during the 1980s (not least in the wake of the LDC debt crisis). This process corresponds to a major financial innovation (Boyer, Dehove, Plihon, 2004), which ended with recurrent serious financial crises among emerging-market economies during the 1990s (Mexico 1994, East Asia 1997, Russia 1998, Brazil 1999, Argentina 2001). We are now, at the beginning of 2008, at the end of the third phase, whose outcome is not yet clear, with its most acute manifestation in the United States where the major innovation of securitization fuelled a “consumer debt economy” that in the end degenerated during the summer of 2007 into the “subprime” crisis.
7.1. Three Phases with Innovation-Led Crises

**Phase I – Euro-dollars and LDC debt crisis:** The market for Euro-dollars is one of the major financial innovations of the 20th century. This global banking network, involving dollar-denominated deposits and loans outside the United States, emerged in response to a need for international monetary liquidity which the U.S. banking system could no longer satisfy alone despite steadily growing American balance-of-payments deficits. The two oil-price shocks of the 1970s underscored dramatically the role of so-called “petro-dollars,” OPEC’s surplus which the banks of London’s City managed to recycle efficiently from oil-producing countries to oil-importing countries and so help contain subsequent global downturns. Those “Euro-banks” helped mobilize in this fashion a very important transfer of savings, principally South-South, by means of commercial banking operations rather than, as had been the case with the Marshall Plan, through grants. But this new international financial system suffered from two major drawbacks. One was the inadequate scope of prudential regulation of the Eurocurrency markets. And the other was the fact that the evolution of those markets depended in the end primarily on the course of U.S. monetary policy whose objectives were primarily oriented towards domestic conditions. When Paul Volcker toughened the Fed’s policy stance to battle against inflationary pressures stemming from the second oil shock of 1979, the hike in U.S. interest rates and subsequent appreciation of the US-dollar caused by this policy shift triggered in 1982 serious debt-servicing problems among the majority of developing countries having taken on $-denominated Euromarket loans in the course of the petro-dollar recycling.

**Phase II: Financial liberalization and crises of emerging markets:** In order to overcome their stagflation crisis of the 1970s, the major industrial nations decided – under the determined leadership of Reagan and Thatcher – to adopt so-called supply-side policies based on major tax cuts for corporations and the rich as well as deregulation of labor and capital markets. The European Union followed in the same direction in 1987 with its “single market” project for goods, people, and capital. In the 1990s this free-market push extended to developing countries under the auspices of the IMF which managed the LDC debt crisis by imposing on debtor countries in need of assistance structural adjustment programs rooted in the “deregulation, privatization, stabilization” mantra of the so-called Washington Consensus. Thus was created a new category of countries known as “emerging-market” economies, in the sense of being newly opened towards international finance. Initially
massive capital flows to these countries helped their financial and economic development. But soon these free-market policies revealed perverse effects. On the micro-economic level, the banks of EMEs ended up more fragile in the wake of their international opening. Their balance sheets became destabilized by their foreign-exchange operations which resulted in a dangerous currency mismatch as they accumulated short-term liabilities in dollars and other key currencies to finance domestic money creation directed into longer-term assets denominated in the local currency which soon ended up feeding speculative asset bubbles and inflationary pressures at home. On the macro-economic level, the local currencies of the EMEs experienced appreciation pressures which, together with mounting inflationary pressures, threatened their competitiveness and their external position. The deterioration of their economic and financial situation threw the majority of emerging markets one after another – from Mexico in 1994 to Argentina in 2001 – into devastating “twin” financial crises, hitting their banking systems as well as forcing brutal adjustments in their exchange-rate regimes. These crises were the result of excessively rapid and badly managed financial liberalization for which those countries were ill prepared. Neither the international organizations, notably the IMF, nor the governments understood that the process of financial liberalization constituted a major financial innovation which would only bear positive fruits in a correctly adapted institutional context (Boyer, Dehove & Plihon, 2004). In most EMEs this was far from being actually the case.

**Phase III - Consumer debt, securitization and the subprime crisis:** Securitization of loans is a major financial innovation which, as was the case with the Eurodollar markets a few decades earlier, has introduced a new form of financial intermediation. It is an activity especially well adapted to standardized mass-volume lending operations, notably those concerning household debt. Securitization is an efficient instrument of risk transfer, in the same league as the derivatives. But like all the other financial innovations, it has ambivalent effects, both good as well as bad. Designed to improve the management of risks, securitization actually ends up encouraging banks to take on too many risks to the extent that they know they can transfer those risks to others (i.e. moral hazard). In that sense securitization became a victim of its own success. On the one hand, by facilitating the financing of households, it fed the (excessively) rapid accumulation of debts among the latter. On the other hand, by encouraging the dispersal of risks, it contributed to a dilution of responsibility along the risk-management chain, made worse by the opaque nature of the over-the-counter markets in which the securitized products get usually traded. Hence, as an
instrument of risk transfer, securitization has proven a powerful vector in the international propagation of the crisis. In that sense it is fair to argue that the subprime crisis is largely the result of the perverse effects of securitization. Its totally surprising scope and intensity can be explained by the fact that this crisis touches on the profound roots of finance capital and the American consumer-debt society at the same time.

The ongoing subprime crisis can be classified as a systemic crisis to the extent that it hits three fundamental pillars of finance-led capitalism – a U.S.-centered global growth pattern in need of diversification towards alternative poles of growth, the paradigm of modern finance emphasizing risk management, and the presumed stabilization of the once-cyclical growth pattern.

7.2. The Global Growth Pattern: Until now the US economy has played the role of “consumer of last resort” for the rest of the world economy and thus served as a locomotive pulling along many other economies greatly dependent on exporting to the huge U.S. market. There have been important spill-over effects from the US economy to other parts of the world (Europe, Japan, Latin America, East Asia), warranting the saying that “if the US economy sneezes, the rest of the world catches a cold.” Of course, given the dominant role of Americans as ‘consumers of the last resort,’ any slow-down in the U.S. economy risks hurting many other regions as well.

Yet at the same time there are indications that the global growth pattern may be changing (IMF, 2007). The recent slowdown in the US economy has not yet had any significant effect on other economies, suggesting that there may indeed be some “decoupling” of the rest of the world from the United States. The U.S. economy accounts for about 20% of global GDP, when calculated on a purchasing-power-parity basis, compared to a 25% share for the five largest emerging-market economies. It may be possible that EMEs manage to rely more on home-grown markets fed by higher levels of domestic consumption or that they trade more among themselves. It may also be that the European Union is ready to act more as locomotive of the world economy as it challenges the United States for economic-superpower status. There are certainly indications that the rest of the world is becoming less dependent on the U.S. economy over the long run, not least because of the growing importance of regional integration in Europe, Asia, and Latin America. Over the long run we are moving gradually toward a multi-polar global growth pattern, driven forward by deepening regional integration.
While these (or other) rebalancing forces may help avert the worst in the short run, they probably will not unfold rapidly enough to counteract the fast-moving ripple effects from the burst of America’s housing bubble or the collapse of securitization.

7.3. The Risk-Management Paradigm of Modern Finance: The subprime crisis has revealed that modern finance is no longer able to ascertain one of its crucial functions, that of risk management. And in that sense the crisis is a profound one which affects all actors of international finance – bankers, investors, rating agencies, central banks, bank regulators – in profound fashion.

• Securitization and derivatives have deprived the banks of their traditional role as financial intermediaries and turned them instead into brokers of financial markets. As such the banks no longer carry the risks themselves, but transfer them to the financial markets – a trend further accentuated by the new regulatory regime for banks known as Basel II.\(^{(12)}\) Knowing that they will resell a large portion of their assets, banks are no longer as concerned with correct evaluation of risks that they expect to be eventually borne by others. This invites gradual erosion of the quality of risks, an inclination to underestimate risks in the pursuit of higher returns.

• The investment banks in charge of securitization mix together all kinds of loans in the pools to be securitized which makes proper risk evaluation difficult. Add to this the proliferation of especially opaque risk-transfer techniques in non-regulated over-the-counter markets (e.g. credit derivatives, contingent-liability guarantees) which leaves all kinds of financial actors more vulnerable as they take on hidden risks unbeknownst to them.

• In this new context financial institutions do not want to assume the credit risks and market risks of their engagement, but instead prefer to transfer those all the way to the ultimate saver – a tendency that explains the construction of several securitization layers where securitized products get thrown into pools for further securitization. At that point the financial system no longer plays its essential role of risk evaluation and management.

• The rating agencies (Moody’s, Standard & Poor’s, etc.) have also stopped doing their job of evaluating the creditworthiness of borrowers properly, because they believe that all loans can be transformed into securities and sold off to investors.

• And amid all these systemic failures of proper risk management, central banks find themselves obliged to assist banks facing acute problems. They have to intervene, lest a crisis of confidence in the inter-bank market triggers a systemic crisis shutting down the credit system. Even though central banks are fully aware that such rescue operations induce banks to
ignore or downplay the riskiness of their engagements even more (the moral hazard problem), they cannot afford not to act. By injecting massive amounts of liquidity into the banking system today, central bank may be paving the way for yet another financial crisis tomorrow.

7.4. Minsky’s Financial Fragility: Finance-led capitalism, with its ample provision of credit at low interest rates, has had the advantage of separating spending from income. This separation allows aggregate demand to be maintained at sufficiently high levels to forestall recessionary adjustments. Since the last major downturn in the early 1980s the world economy, notably the U.S. economy as its largest component, has experienced only two relatively shallow and short-lived downturns (1990/91, 2000/01). Both of these were overcome relatively swiftly by aggressive monetary policy action pushing interest rates lower, sharply rising budget deficits boosting spending, and continued credit supplies maintaining private sector spending despite stagnant or even declining incomes.

But such long periods of stability carry their own seeds of self-destruction by engendering, as H. Minsky (1964) argued so convincingly, increasingly fragile financial structures which eventually will lead to major crisis. As deficit-spending units (i.e. businesses, households) experience success with their previous actions, they become more inclined to take on greater risk in their subsequent engagements. The same bias also takes hold among their lenders. In the absence of any major recessionary adjustment economic actors lose sight of the possibility of failure. They become too optimistic, inclined to downplay risks in the chase for higher returns. Such euphoria is socially constructed, hence widely shared. Over time, usually as a matter of a couple of decades or a quarter of century without major downturns, financing positions of debtors and creditors alike will thus have become progressively more precarious as a result of increased risk-taking. In this context Minsky distinguished between three financing positions – hedge finance where the net cash-flow position of debtors is sufficiently positive not ever to endanger the servicing of debts; speculative finance where net cash-flow positions can be at times inadequate to meet payment commitments as they accrue, and Ponzi finance where additional debt is necessary to meet existing debt-servicing charges. In the absence of any recessionary adjustments wiping out the most vulnerable debtors and so reminding everyone else of the dangers of excessive risk-taking, the financial structure becomes progressively more fragile by containing a growing proportion of speculative- and Ponzi-finance units in the late phases of a long boom. It is at this point that an (otherwise relatively minor) event can expose the degree of overextension prevalent in the financial
structure of the economy and trigger a panic reaction that breaks open a chain reaction of defaults, forced asset sales, financial-market collapses, and generalized shortage of affordable credit – the makings of a financial crisis.

We have good reason to ask ourselves to what extent Minsky’s vision of increased financial fragility building up during a long boom over several cycles does not apply also to the average American family and its huge build-up of consumer debt over the last 25 years, with the bursting of the housing bubble serving as the catalyst for a major financial crisis on a global scale. If that is indeed the case, then we have just entered a crisis-driven adjustment process that goes in both length and depth beyond a mere recessionary adjustment.

8. Conclusion: The Need for a Meta-Theoretical Framework

We are aware that this contribution raises more questions than answers. But that is in the nature of the beast. We are just at the beginning of what looks to be a systemic crisis of major proportions and have at this point no firm idea how this whole story will play itself out. Our ability to identify the most likely scenarios in the near future and figure out what best to do about them depends on our understanding of what is going on.

This question is of vital importance and requires, in light of our globally integrated growth dynamic, a new analytical framework which treats the whole – the world economy – as more than the sum of its parts – that is, the one-hundred ninety-one national economies linked to each other via their respective balances of payments and exchange rates. Such a framework will have to await a meta-theory revolution, akin to Keynes’ macro-theory revolution seventy years ago. In the absence thereof we can only identify possible key elements of such a meta-theoretical framework based on our analysis presented above.

We have already indicated earlier (in section 2) that the stock-flow (SFC) model of Godley and Lavoie may serve as a good starting point. Additional refinements of finance’s role in the SFC model should be a worthwhile exercise in order to get an even more precise sense of the dynamic underlying the growth process of advanced capitalist economies today. Changes in its internal composition and/or in its flows with other sectors add a dimension of liquidity injection whereby the whole becomes more than the sum of its parts. In other words, money creation within the financial sector allows any of the four other sectors to decouple
expenditures and revenues at least for a while. Given such credit-financed relaxation of the monetary constraint, any of these sectors can run up and sustain substantial spending deficits without triggering self-correcting adjustments for a while. We can conceive of the main sectoral balances - business, households, government, and external – as the four pillars of our modern ‘debt economy’ and the financial sector as supplying the funds for such excess spending.

We can then use the refined SFC model as the starting point for a deeper analysis of the modus operandi of finance-led capitalism as it is driven forward by the confluence of increased dependence on debt financing, financial innovation, and the globalization of financial institutions and markets. The key qualitative change characterizing finance-led capitalism as such, and a factor difficult to integrate into merely quantitative macro-level models, is the ability of the system as a whole to generate new liquidity, beyond a given level and distribution of savings, and supply such newly created money via credit as spendable income before it has actually been earned. Such liquidity creation is, however, not a linear process, but instead subject to a credit cycle of recovery, excess, crisis, and readjustment. Both Minsky’s cyclically oriented “financial instability hypothesis” as well as his mostly forgotten 1964 notion of a longer-wave propensity toward supra-cyclical financial fragility are helpful here, especially when re-contextualized as open-economy models that take into consideration the specificities of the prevailing international monetary system. This entails necessarily a more detailed look at the complex structure of the different cross-border capital flows. (13)

Trying to apply these conceptual elements of a meta-theoretical approach to the global growth dynamic unfolding right now, we conclude that the long-standing symbiosis between excess US consumption and export-led growth of EMEs is about to come to an end, thanks to the bursting of the U.S. housing bubble and the related collapse of a recently created alternative banking system based on several layers of securitization. While it is still too early to tell where this crisis will lead us, it seems to us that we are facing a systemic crisis. This first stress test of a qualitatively new accumulation regime will put pressure on policy-makers to search for new regulatory and policy solutions required for the stabilization of finance-led capitalism.
Notes

1) For a more extensive discussion of the “debt economy” see R. Guttmann (1994). This concept needs to be carefully distinguished from the French semantic equivalent “économie d’endettement” which, in reflection of Continental Europe’s post-war emphasis on tightly regulated “administered credit” affording the state a large role in determining the allocation and conditions of credit, puts the emphasis on a credit-system based on bank loans as opposed to financial markets.

2) The second oil-price explosion in the wake of Iran’s Islamist Revolution was part of a broader set of disruptive forces rocking the world economy in 1979, notably a sharp acceleration in the US-dollar’s decline, rapid propagation of inflationary pressures across the globe, and the Fed’s spectacular switch in monetary policy from targeting interest rates to controlling monetary aggregates as a result of which interest rates of $-denominated claims tripled to >20% in a matter of just weeks.


4) Such monetization takes place irrespective of whether new money is created by commercial banks using up their excess reserves to buy up securities or by the central bank increasing its stock of Treasuries and paying for those acquisitions by pumping more reserves into the banking system. Either purchase of government bonds provides an additional liquidity injection into the economy which, as long as practiced in relative moderation, renders the effective burden of that public debt less onerous.

5) See M. McConnell, R. Peach & A. Al-Hashimi (2003) for more details on the effects of refinancing and home-equity loans on boosting consumer spending and depressing the personal savings rate.

6) Three-quarters of the nearly $5000 billion in MSB outstanding in 2006 had been issued by government-sponsored lenders Freddie Mac or Fannie Mae, with a lot of them carrying Ginnie Mae guarantees or FHA insurance. Those kinds of MSB carried at that point a yield 1.5% to 2% above the 4.5% return earned on a 5-year Treasury note whereas the riskiest MSB, composed of subprimes and entirely unsecured, could fetch as much as 15% at the 2006 peak.


8) That question has also come to pre-occupy post-Keynesian economists grouped around Wynne Godley at the Levy Institute (www.levy.org) and C. Fred Bergsten at the Peterson Institute for International Economics (www.iie.com). See also the interesting report by European Central Bank (2007a) on that question.
9) This investment-return differential, which goes evidently far beyond obvious differences in
the composition of claims and liabilities in the United States capital account (e.g.
proportionately larger foreign purchases of low-yielding Treasury securities, more foreign
direct investment by US multinationals abroad), has been the subject of much discussion in
recent years. See, for instance, Bank for International Settlements (2007) or S. Curcuru, T.

10) These bundles are then sliced into tranches representing varying degrees of default risks
and correspondingly different ratings which, when sold off as bonds, also carry higher or
lower returns. Such “structured finance” gave investors a great deal of choice in how to
manage their risk-return trade-off preferences. The problem in this crisis has been that
investors, once hit by panic and assuming the worst, have shunned all CDO tranches, even
those that had been rated supposedly fail-safe. For more on the collapse of the various
securitization layers see R. Guttmann (2007).

11) The “Washington Consensus” refers to the free-market policy biases of the Reagan White
House, the International Monetary Fund, and the World Bank all of whom are located in
Washington, D.C. For a good critique of this imbalanced ideological bias exclusively in favor
of free-market solutions see J. Stiglitz (2002).

12) The so-called “Basel II,” a reform of the Basel Accord of 1988 which is being currently
being implemented under the auspices of the Bank for International Settlements (BIS), allows
banks across the globe to set their own capitalization levels as a function of how well they
calculate and manage their (credit, market, operational, and other) risks.

13) A good effort of reframing Minsky’s financial-instability hypothesis into an open-
economy model, in this case to understand the crisis of emerging-market economies of 1997-
99, can be found in M. Wolfson (2000). Both A. Brender & F. Pisani (2007) as well as M.
Aglietta & L. Berrebi (2007) provide excellent analyses of global growth patterns which
move us closer to the meta-theoretical framework we need.

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