FINANCIAL CYCLES, BUSINESS ACTIVITY, AND THE STOCK MARKET

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The monetary theory of the business cycle in the tradition of Austrian economics[1] holds that trade cycles result from excessive growth of circulating credit, which affects the real economy, leading to unsustainable investment projects that get corrected in a recession when credit contraction occurs. Government and monetary authorities who systematically practice a policy of stabilizing financial assets and business activities by a policy of easy money and bailouts expose individual economic agents to a learning process of diminishing risk perception. Moral hazard as its consequence brings forth more credit growth. While, in the short run at least, these policies may stimulate economic activity, they put the economy on a path to more malinvestment in the long run. With governments and monetary authorities providing tight safety nets, a hideous form of central planning is being installed, causing the spread of soft-budget constraints and the misallocation of capital. Unhampered credit growth as the result of such measures puts the economy on a path toward overextension of investment and consumption patterns that get out of line with individual time preferences and the availability of specific resources. If it were only a matter of aggregate demand and supply gaps, the application of expansive and restrictive measures might cure the problem when the disequilibria become more manifest. But it is under the expectation of ample availability of funds that investors and consumers have pursued a pattern of demand that has become incompatible with sustainable funding in real terms. Economic booms based on credit expansion appear as a period in which, for some time, the law of scarcity seems nonexistent and economic agents tend to pursue projects for which the economy is not yet rich

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[1]For an overview, see Ebeling (1996).

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enough. In this view, the onset of a recession signals the need for structural adaptation at the micro-level, and not the mere readjustment of aggregates.

In this article, the prime concepts are based on the Mises-Hayek theory of the business cycle. Using this model as the general framework for analysis, additions and modifications are introduced reflecting theoretical advances and current problems.

MONEY AND THE BUSINESS CYCLE

Austrian economics uses a micro-foundation for monetary theory and stresses that economic phenomena must be explained on the basis of individual human action.[2] According to Mises (1940, 1980, 1998), the "originary rate of interest" is based on the subjective-individualist valuation of time preference. This rate of interest reflects the discount (rate) of future goods to present goods. The originary rate of interest is based on human valuation, and as such, it is not a monetary phenomenon. It also cannot be explained in the classical mold by the productivity of capital or by the demand and supply of funds. The originary interest rate as a praxeological category reflects the time preference between first order and second order goods, or between consumption and production goods, and in turn constitutes the division of human activity between them. The fact that capital goods are used in the production of consumption goods explains their price but not the interest rate. The originary interest rate is not dependent on the supply of savings, but instead determines the degree of division of goods along the time periods, as consumer time preferences are manifest in terms of demand and supply of savings. If, for example, care for the future should stop as the result of some "end-of-time" syndrome, capital goods would lose their value, and the rate of interest would tend to rise toward infinity irrespective of the money supply made available by a central bank. On the other hand, a hypothetical originary interest of zero would imply the cessation of present consumption, and activities would exclusively be directed toward the production of capital goods.

The central thesis of Mises's monetary theory consists in the proposition that the monetary rate of interest may deviate from the neutral and the originary rate of interest due to money creation (or its contraction) in the credit markets.[3] By using sequential analysis in contrast to the "all-at-once adaptation" as

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[2]For a systematic exposition see Rothbard (1997).

[3]A somewhat different starting point is given by Hayek (1941) as his theory also contains elements of the "real business cycle," making his approach in this regard "un-Austrian"; for Mises, in contrast, the central point is prolonged growth of credit creation beyond mere intermediation; this extension of circulating credit may also be the result of reduced risk perception, when government or central bank bailout guarantees are presumed to exist.

implied by the quantity theory of money, Mises points out that money and credit cannot be neutral, because they do not affect the economy in the same quantities for all economic agents at the same time. While changes of money in circulation may or may not change the price level, aggregate changes imply that relative prices, and with them the relative positions of the individual economic agents, will change. Money and credit enter the economy in a specific form and affect the rest of economic actors in different ways.[4] Only perfect foresight could transform the monetary rate of interest into a neutral rate by applying a price premium. But the formation of expectations about a certain direction of prices is disparate and must remain uncertain.

The Misesian theory of the business cycle holds that the extension of circulating credit implies the transformation of the capital structure by way of changing relative prices and that the boom and bust of credit creation is reflected in real economic activity. When easy money continues to feed the boom, the time-horizon of investment projects gets larger, but when the pace of credit creation diminishes and turns into credit contraction, various economic plans must be abandoned. The onset of a recessionary reshifting process can sometimes be interrupted when new liquidity injection allows the continuation of the old plans. While Keynesian analysis argues that a new upswing based on the multiplier effect will occur, the Mises-Hayek model leads to the conclusion that the new liquidity, while inciting business activity, will make economic distortions more severe. Whereas, at the micro-level, the economy is in need of readaptation, macro-policies prevent this process from taking place, thus inducing an even more severe downturn or a prolonged slump later on. This becomes almost unavoidable after a series of bailouts and injections. When, as it is necessarily the case, bailouts and liquidity creation go hand in hand, this artificial boom will almost inevitably result in a bust that finally becomes immune to further liquidity and direct-demand impulses. Monetary wealth has created an illusion of prosperity and in its wake the structure of the economy has shifted toward consumption and investment patterns that would be in line only with a much higher level of real wealth. But because the real wealth of the economy could not be increased by the mere enlargement of the money stock or rising velocity, the expansion of credit brings about imbalances within the economy, which later require reversals brought about by a recession. Despite the increase in monetary wealth during the boom period, as is reflected in rising valuations of real estate or stocks as

[4]Even if the change in the quantity of money could be known in time, and if it were known for which kind of activities it enters the economy, it is impossible to know ex ante how this will affect the different prices. It is impossible to foresee how, when and to what degree individual valuations will change, and it is individual valuations, not macroeconomic aggregates, that determine the specificity of economic actions.

an expression that capital is being perceived to have become more valuable relative to money, credit expansion will have diminished real wealth during this phase when the credit-induced projects represent erroneous and unsustainable investment.

CAPITALIST CALCULATION

Modern financial market theory excludes the possibility that, for some prolonged time, investors may be induced to pursue erroneous activities. But equilibrium in terms of information efficiency may not arise because knowledge in society is unevenly distributed and different agents hold deviant and often contradictory theories, which may generate diverse expectations.[5] On the other hand, misinformation must not necessarily be randomly distributed but is systematic, when the money rate of interest conveys erroneous expectations about the availability of real funds. Then, monetary effects are not limited to the general price level, but they fundamentally disrupt equilibrium relations and lead to a mispricing of assets.

Government intervention and policy-guided credit allocation exacerbate the effects of easy money as they lead to moral hazard and induce soft budgets. For some time, the disturbances may remain unnoticed based on the observation of the price level, as the index does not contain information about relative prices. Relative inflation (Haberler 1996, p. 37) may occur—and remain unnoticed in average prices as well—when new products and productivity growth emerge on a larger scale.[6] Monetary policy is led to maintain an erroneous monetary rate of interest and cause a further deepening of the capital structure, which in turn tends to generate higher productivity growth and innovation in specific sectors of the economy, although this will contribute further to false interpretations of the state of the economy, because average productivity growth rates contain misleading information when they result from efficiencies that are concentrated in those sectors of the economy where malinvestments happen.

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[5]For early discussions of these problems see, Lachmann (1943, pp. 12–23) and Mises, (1943, pp. 251); for a modern Austrian exposition, see O'Driscoll and Rizzo (1985).

[6]Given present circumstances with the status attached to statistical data, it has also become more frequent that "creative accounting" is not limited to companies that pursue "shareholder value," but is also done by governments when price indexes are reformulated. The newly applied "hedonic price index formula" by the U.S. Bureau of Labor Statistics, for example, does not only reduce average inflation rates, it also provides a statistical boost to productivity and investment expenditures, which then get registered as higher real growth rates in GDP calculations. While both procedures are deceiving, the U.S. method is smarter than the Japanese practice during the boom period of the 1980s, when obsolete items in the basket were removed with considerable time lags, thus artificially stabilizing the price index.

The assumption of rational behavior is an essential starting point in economic theory. But when models of direct exchange are used, the analysis misses the specific character of rationality in capitalist calculation, which is closely tied to monetary values. When analyzing the economy in terms of short-run static equilibrium, the application of modeling techniques is facilitated, but the results are not necessarily in tune with the demands of reality. Capitalist calculation in a monetary economy must use monetary expressions as an instrument of planning economic action, both for consumers and investors. It is money and markets that allow rational calculation, and markets are structured by calculation in monetary terms. For Mises (1940, p. 204), economic calculation beyond a market economy lacks foundation and becomes a senseless effort. Economic calculation in the form of accounting as it was developed with the rise of modern capitalism constitutes the most important instrument of rationality for guiding economic decisions and actions. It is intimately tied to monetary valuations, and in order to be meaningful, it must be based on a price-system that has private property and open markets at its foundation.[7] Central planning and government intervention falsify monetary calculation, which is also deprived of its rationality when the overall money supply and the interest rate become subject to public policies that use money and the interest rate as a means to achieve specific macroeconomic goals, such as a certain growth rate or a certain level of employment.

For the individual actor in the modern economy, monetary valuations are the essential instrument for the rational formulation of economic plans. But money works as a destabilizing force if the monetary rate of interest no longer reflects adequately the relative valuation between current and future goods.[8] Besides excessive credit growth, deviations are caused by persistent current account imbalances, repeated bailouts, moral hazard, and specific government interventions that hamper the free movement of prices and undermine the internalization of losses and profits. For entrepreneurs, there are almost always more efficient technologies available than are presently in use, that is, almost any production process could be made newer and better,

[7]This is the central insight of the Austrian position in the socialist calculation debate (Hayek 1935) first put forth by Mises in 1922 (1981).

[8]Confusion has become popular due to the position of Keynes who put the Austrian concept of the "originary" and "neutral" rate of interest into the same pot as the Wicksellian concept of the "natural rate of interest," which refers to the general price level as the major indicator of equilibrium and disequilibria. In contrast to an analysis in terms of averages and aggregates, Hayek (1931) stresses that even a "natural rate of interest," in the sense that price stability is maintained, may cause profound disequilibria when credit causes shifts between the production and consumption of particular groups of goods. See Keynes (1973, pp. 183 and 242; see also chap. 22, p. 313), and Wicksell (1898) along with Hayek (1931).

i.e., more productive. And for consumers, there are almost always consumption goods on the horizon that seem more attractive if personal wealth were higher. It is the risk of bankruptcy that limits the unrestrained pursuit of these goals, whereas loose monetary and credit conditions lower the degree of risk perception that a business venture will fail or that the individual consumer will miscalculate the permanence of his wealth. Easy credit conditions produce the expectation that there is an escape from the scarcity of time and resources, and that inhibits the application of the most productive ways in the production process and limits the consumption of superior goods.

STABILIZATION POLICIES AND SYSTEMIC FRAGILITY

While the prime thesis of modern finance theory—that financial markets are efficient—has gained more adherents, and while stabilization policies have been expanded on a global level to encompass emergent economies, financial markets have become more erratic and the swings of real economic activity have become more pronounced. Particularly since the mid-1990s, moral hazard, herding, and contagion have reached new dimensions in a series of financial crises and extreme stock market and currency movements.[9] Although criticism of the current stabilization paradigm is on the rise, particularly since the Asian crisis (for example, Eichengreen 1999), the major international financial organizations, with active support by national governments, have continued the policy of bailing out countries and financial institutions. Providing new liquidity and instigating more credit expansion have almost become matters of routine. But in contrast to the declared intention to stabilize economies, systemic fragility is on the rise (Davis 1995), as each new intervention provides the basis for the next crisis case—a feature that appeared prominently after the Mexican bailout of 1995.[10]

Programs by the International Monetary Fund, which originally were intended to restore confidence, now seem to serve as a signal to reverse capital inflows. While the bodies that form the international financial architecture are in search of leading indicators for early warning indicators of imminent financial crises, it is more so the IMF itself that provides these in a paradoxical way. For speculators in international financial markets, it has become an almost sure bet that after the announcement of a stabilization program and

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[9]For data and analysis including the volatility of currencies, stock markets, international capital flows and spreads, see Bank for International Settlements (1999 and 2000).

[10]The apparent success of the Mexican bailout served as a trigger signal for the massive flow of new funds to emerging economies and to Asia in particular, and it may also have marked the watershed between cautious domestic stock investing and the phase that was characterized as "irrational exuberance" by Greenspan (1996) later on.

the provision of new funds, the recipient country will enter into a financial crisis soon thereafter.[11]

The predominant form of current economic analysis, with its almost exclusive concentration on macro figures and a policy orientation toward stabilization, is negligent of the distortions these policies produce on the micro-level and of the changes of perceptions among the private agents that they induce. The readiness of monetary authorities, most notably in Japan and the United States, to provide ample liquidity in conjunction with the provision of so-called rescue packages to a series of emerging economies has led to the dramatic trade-off: While a stop of these measures would reveal the distortions immediately, the preference has shifted toward the continuation of the policy as long as new liquidity and further credit expansion may be expected to do their job.

Simplified macroeconomic concepts in the Keynesian tradition support these policies. Emphasizing the view that governments and public institutions are needed in order to stabilize markets, the IMF has assumed the role of a global economic policy authority. But with the interventionist spiral in full swing, its policy prescriptions begin to work counter to intentions. By ignoring the fact that monetary and fiscal impulses change relative prices and the capital structure of an economy, the policy formulations based on the analysis of aggregates miss the effects that take place at the micro-level and emerge as macroeconomic disequilibria only later on. Deceived by the experience that fiscal and monetary impulses quite often are highly effective in the early stages of a cycle, the rationale has become widely accepted that they would also work in the long run. But when measures to "keep the boom going" are applied repeatedly, more profound transformations of the capital structure will occur. This will make the economy less and less efficient, leading to a bust and, finally, to economic paralysis. For Austrian economics, the emergence of a recession signals a misdirection of investment due to discoordinated economic plans that need correction. Plans and economic actions must undergo revision in order to establish a new tendency toward equilibrium. But with new liquidity or active demand management, the process of reassessment and correction gets postponed, and the trend toward a widening of disequilibria is made to continue.

Systemic fragility is a situation where expectations of investors and consumers have become highly unstable and economic action is hampered by the perception of insecurity. This state of low confidence is brought about by policies that undermine the trust in the perceived validity of prices and the monetary interest rate as the basis of economic calculation. Systemic fragility

[11]Turkey, in 2001, is only the latest case of this kind in a series comprising a number of Asian economies, Russia, Brazil, and Argentina, among others.

tends to show up at first in financial markets, because it is here where expectations and actions are most closely linked.[12] Once established and extended to the real economy, systemic fragility implies a process where monetary and fiscal instruments become less and less effective, and their application will only add to a deepening of the misalignments.

BUBBLE ECONOMIES

In a stylized sequential analysis, an artificial boom is initiated when monetary expansion is accompanied by the implicit or explicit promise of bailouts, opening the way toward excessive growth of circulating credit, i.e., money creation, which is not backed by the increase of real funds in terms of current savings. As commercial banks and other financial institutions become less risk-averse, investors are led to presume that the signaling and sanctioning effect of losses has become less important or is absent, and that will induce businesses to adopt more advanced standards of technology and to expand investment. Rising price-earnings ratios for shares signal stock market valuations, which imply an extension of the time horizon for investment that is incompatible with actual savings. Fundamental scarcity gets neglected in favor of expectations about future wealth that seem justified by the appearance of new areas of commerce, technological breakthroughs, income growth, and full employment. But the increased nominal wealth embodied in rising asset valuations induces not just a wealth effect but also a change in the pattern of consumption and production. Goods, that earlier seemed out of reach, now enter the demand schedule. Production and consumption are not only higher in nominal and price-deflated terms, but their structural composition changes as well. It is not just the demand for goods, that earlier were regarded as luxuries that is on the increase; science, research, and development also get impulses.[13] A spirit of prosperity enters all aspects of social and economic life.

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[12]In a tradition going back to Mackay (1841), reinforced by Keynes (1936, chap. 12), and recently presented by Chancellor (1999) and Shiller (2000), "psychological explanations" for financial turmoil are popularized. But concepts like "madness," "animal spirits," or "irrational exuberance" do not elucidate the economic and monetary causes for such states to emerge and rather leave us at despair or, in a hideous twist, suggest the conclusion "that the duty of ordering the current volume of investment cannot safely be left in private hands" (Keynes 1936, p. 320), obscuring even more so the role of governments and monetary authorities as the propagators of this kind of conditions in the first place.

[13]The perceived equilibrium position changes due to the expectation of future wealth. In this way investment activities get directed toward the "earlier stages of the production process," which under modern conditions are research and development, while consumption shifts to leisure products and other superior goods. But besides the limits set by the sustainable availability of real funds, it is time that puts a strict bound on the extension of such activities. For example, the projections of the growth of the new economy, and

Bubble economies are being formed in a sequential manner, and their development cannot be grasped without taking duration into explicit consideration (O'Driscoll and Rizzo 1996, p. 198). The formation of a bubble economy is linked to a learning process and its stages are bound together by causal links where, at first, the expansion of circulating credit leads to an unsustainable pattern of demand, and that, in turn, is reflected in the corresponding production structure that absorbs resources beyond their long-term availability. The appearance of the imbalances is a process in time, as the incompatibilities do not show up right away but appear only later on, when finally complementary investment is lacking and ongoing investment projects must remain uncompleted, or when completed investment projects lay idle with inventories piling up. Demand for consumer and investment goods must undergo a phase of adaptation, as the need emerges for more urgent goods, which are not being produced in sufficient quantities, because their provision has been neglected in favor of the production of goods for which the economy is not yet wealthy enough. The expansion of credit induces the pursuit of economic goals that are incompatible with available means. Superficially, the appearance of unused capital and labor may be interpreted as a lack of demand, and additional liquidity will help to stimulate the economy in the short run; but while some older projects get completed and underutilization of production factors seems to disappear, new malinvestments are being initiated as well. It is almost inevitable that with the extension of the artificial boom, economic distortions will become more severe.

Among the large economies, it has been Japan in the past two decades that has fallen victim to this policy in both parts of the cycle. At first fabricating an extended upswing in the 1980s based on "low capital costs," government and monetary authorities have applied a host of interventionist schemes, ranging from direct bailouts to various fiscal measures and a monetary policy of low interest rates aimed at stimulating the economy, since the beginning of the recession, only to enhance government indebtedness with no recovery.[14]

But in the U.S., too, during the late 1990s, when unlimited prosperity seemed feasible based on intelligent monetary management, the boom became overextended when, partly induced by the international and domestic

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the Internet in particular, imply an extension that seems only realizable if consumers were so rich as to be able to increase future income along with a substitution of work for more leisure time.

[14]In Japan, the overnight call money rate has been brought down to effectively zero in 1999 and fiscal deficits have continued to rise, bringing the Japanese gross debt-GDP ratio up to over 100 percent, and the net debt-GDP ratio, which was 4 percent in 1992, up to over 30 percent of gross domestic product In 1999, the general government financial deficit exceeded 7 percent with a tendency to rise further in the coming years (BIS 1999, p. 18; 2000, pp. 20, 68).

financial environment or special circumstances (such as the expectation of a "year 2000 problem"), monetary policy provided ample liquidity. This left aside the consideration of disequilibria in the economy that showed up more drastically each year during the second half of the 1990s, ranging from current account deficits and the accumulation of foreign debt to falling personal savings rates and rising domestic debt levels. While the deficit reduction of the central government was widely noticed, the unprecedented debt inflation in the other parts of the U.S. economy hardly attracted attention—despite the speed of its accumulation and its dimension.[15]

As long as it seemed that financial wealth creation by the stock markets could go on indefinitely, disequilibria hardly mattered, as the economy appeared to have access to sufficient funding in order to compensate for the lack of savings and rising internal and external debt levels. But as soon as asset valuations began to adjust, various additional disequilibria showed up with excess capacities in some areas and shortages in other sectors. Along with a sharp reversal of sentiment that accompanies the process of reassessment, the very factors whose interaction brought about the boom then start to work in reverse.

FINANCIAL MARKETS

Modern financial market theory assumes that deviations from equilibrium are largely a short-term phenomenon and that persistent disequilibria will not occur. When risk models are based on the concepts of information efficiency, the problem arises that, by ignoring the potential for long-term disequilibria, practitioners in financial markets are misled into taking excessive risk positions, thus making boom-and-bust cycles more severe.[16] The assumption of

[15]In the United States, the debt-income ratio of the household sector rose to over 100 percent of disposable income toward the end of the decade (BIS 1999, p. 19); the corporate sector experienced a sharp rise in debt, and although the profit situation remained favorable, corporate indebtedness increased to its highest level since 1990, with 80 percent of gross debt as a percentage of GDP in the corporate sector (p. 18). With the current account deficit of the U.S. reaching $338.9 billion in 1999 (BIS 2000, p. 32), debt issuance by the private sector accelerated drastically in the second half of 1990s and reached new highs every year in the second half of the 1990s, with an annual issue of $250 billion in 1994 and markedly over $1 trillion in 1999. Although the central government reduced slightly its debt position, independent public agencies and so-called "quasi-public" entities expanded their debt, so that the overall annual debt issuance of the total public sector more than doubled since the mid-1990s. In 1999, new private and public net debt issuance together amounted to more than $2,000 billion (p. 111); these figures drastically exceed both money and GDP growth.

[16]This is also acknowledged by the Bank for International Settlements in its 69th Annual Report (1999, p. 101), as it writes: "Risk management systems that have been primarily designed to measure and control market risk are not always appropriate to characterize price behavior. Such systems may actually contribute to the strain as they imply that

market efficiency eliminates the need of judgment and implies that any asset price seems correct. But while prices are the most important instrument of obtaining economic information, this does not mean that prices contain all relevant information.[17] By ignoring fundamental uncertainty, the essence of financial and economic decision-making is discarded in favor of the simplified concept of risk. On a practical policy and management level, the risk models of modern finance contribute to a narrow understanding of financial markets, as the assumption prevails that in finance and economics there are constants or averages which may form the basis for mechanical calculations that hold in the future. This way, the importance of human action—that is, the creative formation of plans and their precarious transformation into action—gets lost in favor of a view that presumes normal conditions but is at disarray when dealing with exceptional circumstances.[18]

Economic and stock-market bubbles go hand in hand. They are produced by a monetary policy that manipulates the monetary interest rate in order to achieve higher economic growth or full employment targets, or which, by pursuing the more subtle forms of promising financial safety nets, implicitly creates moral hazard. By creating an economic and financial environment where profit and loss no longer seem to matter very much because bailout expectations have become manifest—be it in the form of monetary and fiscal policies or by way of specific bailouts—investment projects get overextended while personal savings contract. As the perception of risk recedes and capital valuations rise, it is only natural that the need to forego current consumption is seen to diminish.

Economic activity is a continual process of speculation, creation, and correction. It is this ongoing correction process that stabilizes a market economy. But in order for this process to work smoothly, free prices and the strict internalization of profits and losses are required. While individual errors are quite common and may largely explain short-term fluctuations, long-term deviations from equilibrium that end in an overall collapse of economic activity are a collective phenomenon characterized by a "mammoth cluster of errors" (Rothbard 1996, p. 73), and it might appear as if markets fail in coordinating economic activities. But neither the emergence of a bubble nor its breakdown

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investors should scale down portfolio risk by liquidating their positions in a declining market."

[17]Fund investing contributes further to produce excessive valuations in both parts of the cycle when the fund managers neglect valuations in favor of benchmarking and individual fund investors act solely on the basis of the fund's performance.

[18]The relentless application of modern finance theory by the Long-Term Capital Management Fund (LTCM) in its pursuit to bank on normal distributions is just one of the more dramatic recent illustrations of this point. See Lowenstein (2000).

implies market failure; boom-and-bust cycles rest on policies that have destroyed the proper market process by explicit or implicit bailout guarantees and easy money.[19] When stock-market investors, creditors, and businessmen feel that there is no risk in overextending themselves, unrestrained financial and real investment becomes a competitive necessity. Bailout expectations shift the risk pattern. While before, the major risk of business expansion was the accumulation of excessive levels of debt, the orientation in an industry protected by bailouts is directed toward the problem of being left behind, should the expansion not be swift enough. Although direct bailouts of specific companies are mostly confined to economies with a weak market system, the protection of the financial sector is quite common, in developed and developing countries alike; but the effects are almost the same as with direct protection when, as its consequence, financial institutions feel safe to fulfill the demands for more dubious loans.[20] When monetary authorities repeatedly act to ward off economic downturns and continue to feed the markets with fresh liquidity, the belief in an eternal boom becomes more widespread each time, and economic activity becomes more intensive. With the continuation of such a boom, prudence diminishes, and new types of entrepreneurs appear, who neglect profits in favor of market share and who eagerly apply the latest standards of technology irrespective of a prudent evaluation of their economic merits. Such a state is characterized by general optimism, the basis of which is found in the continuance of interacting feedback between expectation and verification among the actions of consumers, shareholders, businessmen, government, and monetary authorities.[21]

Asset bubbles need a threefold basis: first, there must be a monetary policy that allows excessive credit growth; second, monetary authorities and the government must induce moral hazard by signaling their readiness for

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[19]Historically, "Law's System" is the prototype, where, like in its follow up, the "South Sea Bubble," credit creation and direct government involvement operated closely together. For a historical overview, see Kindleberger (1989).

[20]In order to produce the boom, the central bank and the financial sector must work in tandem, while the symbiosis breaks down in the bust-phase when banks are forced into a credit crunch because of the burden of nonperforming loans on their books.

[21]While Keynes (1936, pp. 315ff.) vividly describes the emotional state of affairs as he came to see it during the 1920s, when financial markets "under the influence of purchasers largely ignorant of what they are buying and of speculators who are more concerned with forecasting the next shift of market sentiment than with a reasonable estimate of the future yield of capital assets" became exposed to sudden shifts of sentiments, he pays little attention to the underlying monetary factors for this state of affairs in this specific period (cf. Rothbard 1983) and regards the "sudden collapse in the marginal efficiency of capital" as a "highly psychological phenomenon" (Keynes 1936, p. 202) determined "by the uncontrollable and disobedient psychology of the business world" (p. 317).

bailouts; and third, investors must be exposed to a learning process where repeated verifications of bullish expectations lead to diminished risk perception.[22] Excessive asset bubbles are based on the interaction of these factors and include the activity of consumers who expand their time horizons in terms of a consumption pattern that shifts toward goods of higher preference based on an enhanced perception of wealth leading to an equivalent extension of the production structure.

INTERNATIONAL CAPITAL FLOWS

Credit and money are active forces, as they not only affect the structure of the exchange of goods and services but also have a profound impact on the time dimension of an economy's production and consumption pattern. Even under a regime of price stability, the way credit is allocated will change the structure of capital (cf. Garrison 1985). While it is the financial crisis that gets attention and makes authorities apply a host of measures, it has been the excessive creation of circulating credit in the first place that has brought forth the misallocation that is revealed when liquidity gets tight.[23] It is not the outflow of monetary capital that produces the distortions, but it is the massive inflow that makes malinvestment happen. These are brought to light once additional liquidity vanishes.

The difference between the slow build-up of external imbalances in the phase of credit expansion and the rapid contraction of credit is reflected in the asymmetry of the capital adaptation process, when the contraction confronts the debtor country with the task of reshifting its industry from domestic to foreign demand and reorienting production toward internal demand in the creditor country. This process can neither be swift nor smooth, because the adaptation to a new demand pattern is tied to preceding changes of the capital structure. Because the impact of credit expansion and contraction goes beyond financial markets and encompasses the capital structures of the economies involved—both in the debtor and creditor nation—the contraction of

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[22]Seen in this light, the ongoing academic discussion of rational versus irrational investment behavior appears as being empty of substance.

[23]In the Asian crisis countries (comprising Indonesia, Korea, Malaysia, the Philippines, and Thailand), annual international bank and securities financing amounted to an average annual inflow of $28 billion from 1990 to 1995 and rose to $58 billion in 1996, only to reverse sharply since 1997, when outflows accumulated to $124 billion until 1999 (BIS 2000, p. 39). Before the crisis, high current account deficits were financed by bank credits, often with a short-term maturity, and internal credit extension to domestic companies expanded rapidly. In 1999, nonperforming loans as a percentage of total loans of commercial banks stood at 6.2 percent in Korea, 38.6 percent in Thailand, 9 percent in Malaysia, and 37 percent in Indonesia (p. 50).

credit implies a lag between the time period at the financial level, which is abrupt, and the adaptation of the production processes, which is time-consuming and difficult to achieve. While the models of growth-cum-debt[24] presume that economic growth catches up with the payment obligations, there is no guarantee that correlations between investment and growth do hold for the term when financial flows reverse. The inflow of external capital facilitates the parallel extension of the production of consumption and investment goods. As foreign capital inflows add to the availability of funds, an enlargement of the capital base can be initiated without necessarily reducing relative consumption. The more prominent signals of distortion, such as rising prices or higher interest rates, may not show up for some prolonged period of time—at least as long as foreign funds are available. Rapid growth may be deceiving, even if it occurs under conditions of a stable price level. High growth rates may be the result of interventionist policies that make distortions within an economy more rigid, and the measurement of price stability by standard indexes does not guarantee that distortions are not present, given the existence of counteractive deflationary effects from imports and technological progress, and the effects of capital inflows on the exchange rate. But international credit acts destructively once inflationary tendencies or other risk factors appear. It is the ensuing credit crunch that brings economic distortions to the surface.

For a variety of reasons, the swings of expansion and contraction of credit are more pronounced in the international economy than within a closed economy:

- In contrast to credit expansion and contraction in a closed economy, in which the boom-and-bust sequences are mostly limited to individual sectors and only under exceptional conditions affect the whole system, international credit relations often encompass the entire economy and whole regions, and the regional contagion helps to increase the impact on the individual economies involved.
- As the market structure in which the major international creditors operate has quasi-oligopolistic features with strong positions of market leaders, there is a widespread tendency of similar behavior within the group (herding).
- In international financial markets, it is technically easier for the authorities to initiate a bailout, as it is done at the level of government and international organizations. By readily assuming systemic risk,

[24]See Simonsen (1985) for the guidelines that developing countries used in forming their debt strategies.

the authorities in the creditor and debtor countries tend to initiate various rounds of resumption of expansionary credit cycles.

- The assumption that an international safety net does exist lowers the risk perception of creditors, which leads to an oversupply of credit. The limit to this credit is quite flexible and may only find an end when the authorities lose the willingness for further bailouts or when the distortions become highly manifest.
- International credit relations are deeply interwoven with political and military-strategic aspects, and this, too, will increase the tendency of credit expansion to the ultimate limit, while in the process of contraction the same political elements will cause an acceleration of credit implosion.
- With international credit, there is the additional transmission mechanism of the exchange rate that tends to reinforce the processes of expansion and contraction, making the currency strong as long as the credit inflow continues, and weaken the exchange rate as a result of the capital outflow.
- Government intervention in debtor countries contributes additionally to intensify the credit cycle by applying measures that range from maintaining unsustainable exchange rates to state-guided credit allocation and public deficits. When these policies get out of control, a self-enforcing trend occurs on the downside.

International credit inflows allow a lower monetary interest rate than otherwise, and thus make economic agents overestimate the availability of real funds. The accumulation of foreign debt, which opens the chance for the borrowing country to acquire and maintain higher standards of capital goods, comes along with the expectation of future prosperity that accompanies the extension of the elevated level of production and consumption. Only when credit contraction occurs will it become clear that investors and consumers have extended themselves and that the presumed economic wealth lacks foundation. The contraction leaves projects unfinished, and with the lack of complementary goods, the economy is forced into a process of recessionary adaptation. Even if the occurrence of credit contraction could be forecast,[25] it is

[25]The assessment of international credit risks necessarily contains a plethora of assumptions, none of which is usually very well founded, because the observed variables—such as price stability, stable exchange rates, improved export performance, etc.—are not independent of the stability of the credit inflow itself. In particular, the conventional measures of external vulnerability (IMF 2000) are linked to the external inflows.

impossible to prepare the capital base of the economy for the change from positive to negative financial flows, because the specific circumstances—beginning with the pattern of relative prices—cannot be foreseen. In order to generate funds for the transfer process, the debtor country's industries must achieve international competitiveness, whose specific form can neither be planned nor implemented in advance but must emerge only with the exposure to the market process itself (Hayek 1978).

In a multi-country world, the transfer process in the phase of credit contraction becomes more complicated when various debtor countries pursue similar paths of export expansion and must face increased price competition. In addition, a successful transformation of the debtor countries' capital base needs the respective readaptation of the creditor countries' production and consumption structure. The transfer process will break down when trade barriers or other forms of government intervention hinder or prohibit the expansion of imports in the creditor countries. As during the process of international credit expansion, the creditor and debtor countries are bound together. In the phase of credit expansion, compatibility of strategies is given, when the debt accumulation and import expansion of the debtor country finds its counterpart in the expansion of the creditor country's export industries. The phase of credit contraction, however, may result in a prolonged stagnation in both types of economies, when political unwillingness or economic frictions poses barriers against the adaptation that is required to take place at the level of the real economy in face of the reversal of financial flows.

CHANGING THE PARADIGM

In a passage from the *General Theory* that apparently was directed at the Mises-Hayek theory of the business cycle, Keynes put forth the proposition that

> the remedy for the boom is not a higher rate of interest but a lower rate of interest! For that may enable the so-called boom to last. The right remedy for the trade-cycle is not to be found in abolishing booms and thus keeping us permanently in a semi-slump; but in abolishing slumps and keeping us permanently in a quasi-boom. (1936, p. 322)

Besides being vulnerable to theoretical objections, however, this fascinating promise does not live up to the facts. Seen in the light of decades of experience, it is the application of various concoctions of the Keynesian recipe that has produced the "quasi-slumps"—like the stagflation period of the 1970s, the enduring debt crisis of developing countries, and the continuation of the Japanese stagnation. Nevertheless, the attraction of applying Keynesian policies is still appealing today. It comes from the short-term effectiveness of

expansive measures when distortions are still mild. But by trying to create a continuous "quasi-boom," there is not just the danger that the boom will get out of control and an inflationary spiral will be triggered but also that more distortions will be produced, finally becoming so severe that there will be no longer an immediate cure.[26]

Facing a potential slump, economic policy is confronted with choosing between the applications of new expansive measures in fiscal and monetary policy or of letting the markets do the re-equilibrating. But while there is always the attraction to pursue "active policies" as long as these are seen to bring relief in the short run, interventionism comes with high costs, although these are less visible than the immediate burdens of nonintervention. It is this asymmetry that puts the Austrian theory of the business cycle at a political disadvantage; it expects quite a high degree of insight and courage from policymakers. Although short-term, "active" economic policy has political popularity on its side and finds support in the Keynesian streaks of economic theory, it is not necessarily rational economic policy. In contrast, Austrian economics provides a theory of the long run, and it is in the long run that all bills come due.[27] As long as the attitude of *après nous le deluge* does not become the guideline of public action, it is politics, which takes the long-term effects into account, that deserves the attribute of rationality. The long-term perspective is ingrained in the method of Austrian economics as it uses sequential analysis of causal links in time in order to detect not just the immediate but also the more remote effects of actions. The special status of open markets and an intervention-free price system comes from the same type of dynamic analysis, which brings to light that although there never can be the perfection of an equilibrium state in the real world, free markets drive human actors to constantly work toward such a situation. But when assumptions get repeatedly verified that there are government guarantees and that the risk of losses will be nullified because central banks and governments stand "ready to act" and will provide emergency financing, capital misallocation will be the inevitable consequence.

In the more specific context of macroeconomic policies, adopting an Austrian perspective implies that monetary policy is ill-advised to neglect excessive credit growth, the money supply, insufficient savings, unsustainable

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[26]Keynes himself made it explicit that his remedy for the trade cycle is the substitution of one malinvestment by another one. If one pyramid is not enough, build a second one! But it does not take much fantasy to see that this kind of economic policy, while probably creating full employment, is a map for the road leading to capital destruction and poverty.

[27]This way, Austrian economics carries on the tradition that was the trademark of classical political economy (see, for example, Holcombe 1999).

current account balances, and the burden of external debt in favor of overemphasizing economic growth, employment, and price stability. In the light of Austrian economic theory, high investment and growth rates and even rising productivity may be deceiving when they occur as the result of interventionist policies and credit growth that induces capital misallocation. Bailout guarantees—also when their ascribed function is "to stabilize the system" and as such are undertaken in the seemingly unspecific form of monetary and fiscal measures—undermine the proper functioning of the capitalist system. Like other interventions, they destroy the signaling and sanctioning apparatus linked to losses. Free markets and a strict profit-and-loss-system are the best ways to signal erroneous action and induce the constant process of corrective adaptation to bring forth efficiency in the allocation of capital.

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