Economic Order, Displacements and Recurring Business Cycles

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Abstract
The paper describes business cycles within Hayek’s framework of order and aims to provide an understanding of recurring crises in recent financial history.

We argue that a business cycle is initiated by a displacement (large shift) that lowers the degree of plan coherence (order). Displacements can be endogenous (e.g. innovations) and exogenous (e.g. policy alteration). When agents lack an understanding of the impact of the displacement, they cannot form coherent expectations, that are necessary for correct planning. Mal-expectations and the resulting coordinative failures can drive a cycle.

The application of the framework aims at making sense of recurring bubbles since the break-down of the Bretton Woods System. The newly emerging international financial architecture made the financial system more elastic. Exogenous displacements such as capital account liberalization initiated cycles in developing countries. But the competitive market system also brought about many innovations that made the system inherently unstable.

Keywords: Hayek, order, displacement, business cycle.

JEL: E32, B5.

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1 We thank Adrian Höhl and Andreas Schäfer for helpful suggestions.
1 Introduction

The long history of financial crisis suggests that cyclical fluctuations are as old as financial markets themselves (Reinhart and Rogoff 2009, Kindleberger 2000 or Chancellor 2000). We aim to provide an understanding of recurring financial market cycles in recent history within a Hayekian framework of an ever-changing order.

To Hayek order means a high degree of plan coherence. Order “enables us to make successful expectation and hypothesis about the future” (Hayek 1994, p. 208). An endogenous or exogenous displacement (large shift or change) to an economy reduces the market participants’ ability to plan if they lack an understanding of the impact of the displacement. The results are mistaken expectations and a lower degree of plan coherence, or (in other words) order.

We argue that in such a situation a cycle can emerge that reflects the knowledge problem of market actors. Thus, boom and bust represent a systematic failure of expectations. Over time, learning will help to cope with the ignorance about the displacement and a tendency towards plan coherence (which hinges on correct ex-ante expectations) sets in.

Our contribution to the literature is twofold:

1. We know of no other paper that discusses business cycles within Hayek’s framework of order. Previous literature applies the idea of emerging orders to institutions or common law (Benson 1989; Sudgen 1989; Cronk 1988; Stringham 2003). Further McKinnon (1992) uses the framework to describe the transition problem from a socialist to a market economy in Eastern Europe and in East Asia. Recently, Harper and Endres (forthcoming) explain capital formation using the approach.

Although Hayek’s economics always emphasized knowledge and coordination problems under different conditions (O’Driscoll, 1977), Witt (1997, p. 54) points out that “he

2 Own translation.
never came back to discussing the business cycle from the point of view of his theory of spontaneous order.” This is considered a gap in Hayek’s work. Because Hayek’s early work on prices, production and cycles seems not to fit in well with his later work on social order, the literature often distinguishes between two or more “Hayeks” (Witt 1997).

There is, however, a clear link between the Mises-Hayek cycle theory and Hayek’s theory of order. In the Mises-Hayek theory, the “business cycle evidences coordination failure” (O’Driscoll and Rizzo 1996, p. 202) – or in other words a low degree of order. A divergence of the market from the natural rate of interest causes a malcoordination of consumers’ savings and producers’ investment plans (Garrison 2006, Horwitz 2000 and O’Driscoll and Rizzo 1996). Based on the Mises-Hayek cycle theory e.g. Salerno (2011) and Hoffmann and Schnabl (2011) suggest that the latest Great Recession is the outcome of too expansionary monetary policies which caused mal-investment and overconsumption booms that turned bust in 2007-8.

Whereas mal-coordination is an important factor within Hayek’s cycle theory, this does not close the gap Witt (1997) noticed in Hayek’s work. Therefore, we discuss the emergence of cycles within Hayek’s framework of order instead of discussing the coordinative failures within the Mises-Hayek cycle theory. Our analysis does not use the natural rate – market rate terminology and analytical framework. But it does not contradict it. Thought in this framework, we also allow for factors that may change the perception of the natural rate of interest to drive cycles. Credit expansion as exogenous displacement becomes a special case. In line with recent research, cycles are characterized as credit booms gone bust (Schularick and Taylor forthcoming; Borio 2003). But in our explanation credit growth can be a cause as well as merely a reflection of the cycle.

3 Hayek (1976 [1929]) saw this as important factor that drives cycles. But he later dropped them in elaborating on cycles. He criticizes Mises to deal only with monetary factors which he saw as a special case that may be prevalent in right now but are not sufficient condition to explain cycles.
We intend to provide an understanding of recurring boom-and-bust cycles since the break-down of Bretton Woods within the Hayekian framework. Therefore, we apply it to (1) exogenous and (2) endogenous displacements as found in recent history. First, we describe the effects of policy since the break-down of Bretton Woods in the process of financial liberalization. Second, we explain why capital account liberalization brought about severe boom-and-bust cycles in developing countries. And third, we discuss the issue of financial innovations to integrate the Kindleberger-Minsky (as well as the early Hayekian) view of an inherently unstable economy.

While exogenous displacements may be partly avoided when they are in the realm of a countries’ policy maker e.g. by implementing policies on the margin (e.g. gradual financial liberalization), from a Hayekian point of view, endogenous displacements such as discoveries or innovations are the very result of the competitive market process. Here, we provide an alternative view on the inherent instability of the system.

To prevent the emergence of endogenously induced cycles would necessitate superior knowledge of e.g. a policy maker who forms expectations independent from the rest of the system or to kill off the very innovative forces of the market. Therefore, we draw a cautious policy advice with respect to cycle prevention from the Hayekian framework: As policy makers are part of the system they should beware of causing themselves displacements and uncertainty.

The remainder of the paper is as follows. In section 2 we introduce Hayek’s framework of order and explain the coordinative processes as we understand them. Section 3 discusses displacements and how they may drive cycles. In section 4 we apply the framework to recent historical events: (1) financial liberalization and (2) financial innovation. Section 5 concludes.

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4 Hayek (1976 [1929], p.111) explains in “Die Wiederkehr der Kreditzyklen” that the credit system is inherently unstable. Therefore we have to accept that there are cycles. Cycles are the price of progress.
2 Economic Order and Market Process – A Hayekian Framework

2.1 Order

Following Hayek (1982, p. 36) order is “a state of affairs in which a multiplicity of elements of various kinds are so related to each other that we may learn from our acquaintance with some spatial or temporal part of the whole to form correct expectations concerning the rest, or at least expectations which have a good chance of proving correct.”

A high degree of order “enables us to form successful expectations and hypotheses about the future (Hayek 1994, p. 208).” It allows for plans of market participants to be largely fulfilled (Hayek 2003 [1967], p. 40). The neoclassical equilibrium would be a special case of order. It is the state in which “[…] individual plans are fully coordinated. Each plan can be successfully executed. Means are exactly matched to ends” (Lewin 1997, p. 246). To Hayek (1937, p. 45) this state of perfect plan coordination was not of major interest. Instead, he was interested in what constitutes order and how it comes about.

Following Hayek (1982, p. 35-38) the order consists of two layers. The first layer is the underlying order. The underlying order has an impact on the relationships of agents. It includes rules such as laws, but also norms, morals, traditions, habits, customs and so on. Examples for such rules are the price mechanism or property rights.

In this respect Hayek (1982) distinguishes two kinds of rules or norms: nomos and thesis. Nomos is “a universal rule of just conduct applying to an unknown number of future instances and equally to all persons in the objective circumstances described by the rule, irrespective of the effects which observances of the rule will produced in a particular situation.

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5 Mulligan (2009, pp. 110-113) summarizes the literature that precedes Hayek in the use of the concept of order.
6 Own translation.
7 Hayek (1937, p. 45) argues that “the statement that, if people know everything, they are in equilibrium is true simply because that is how we define equilibrium. The assumption of a perfect market in this sense is just another way of saying that equilibrium exists, but does not get us any nearer an explanation of when and how such a state will come about.” For more details see Caldwell (1988), Yeager (1997), Rosen (1997) or Coyne et al. (2005).
Such rules are negative. They permit some action. In contrast *thesis* is a positive rule “which is applicable only to particular people or in the service of the ends of the ruler” (Hayek 1978, p. 77). The rule describes what *ought to be* done.

The underlying order is the grounding of the emerging order – the second layer. Depending on which type of rule is predominate in the underlying order; the character of an emerging order is either more spontaneous or more exogenous. If all rules are of type *nomos* (negative rules), the order emerges fully spontaneously. If all rules are of type *thesis* (positive rules) and everything is defined the order’s character is fully exogenously determined.

Therefore, we can distinguish a ‘made’ from a ‘spontaneous’ order. The made order *taxis* is the result of a planned construction or arrangement. This is an order based on many positive rules. An example is the directed social order, e.g. a firm. Because a planner of a made order has to understand its structure, made orders are relatively simple. Expectations are fulfilled if commands or plans are followed correctly (Hayek 1982).

Spontaneous orders *kosmos* can - but do not have to - be more complex. In the market economy the players have a planned structure and certain goals. Consumers plan their own wants. Firms offer products that suit the wants of consumers to profit. Many players aim at different ends. To know and match their plans would be a highly complex task. This is not in the realm of a planner because knowledge is dispersed throughout society (Hayek 1945).

Following Hayek (1982, p. 109) the market economy is a “special kind of spontaneous order produced by the market through people acting within the rule of law of property, tort and contract” necessary to guide and allow for interaction. Within this basic framework the market order is induced as “product of the action of many men but not the result of human design” (Hayek 1982, pp. 37-38) and its result cannot be foreseen by anyone.

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8 In this case, Hayek refers to the underlying order as abstract order (Hayek 2003 [1967], p. 52).
9 The made order may also be called exogenous or artificial order (Hayek 1982, p. 37).
10 The spontaneous order may also be called endogenous or self-generating order (Hayek 1982, p. 37).
In the real world, governments intervene in the market beyond the Hayekian criteria. They stabilize the economy in times of crisis or provide a welfare system to improve the market outcome according to the normative standards of society. Interventions and regulations from government restrict the forces of spontaneous order. The more regulation the higher the degree of command and the fewer wants can be pursued by individuals. Therefore, a market economy as observed in the real world does not emerge spontaneously in the strict sense.\footnote{“[T]hough spontaneous order and organization [made order] will always coexist, it is still not possible to mix these two principles of order in any manner we like. If this is not more generally understood it is due to the fact that for the determination both kinds of order we have to rely on rules, and that the important differences between the kinds of rules which the two different kinds of order require are generally not recognized” (Hayek 1982, p. 48).}

**Figure 1: Properties of Emerging Order**

Source: Own Illustration.

Figure 1 illustrates the properties of emerging orders. Based on Figure 1 the order that emerges in society is a middle solution between made and spontaneous order. Even though the spontaneity is restricted by the normative standards of society as imposed on it via legislation, governments do not plan and regulate the majority of activities in the market. Therefore, the emerging economic order is still complex. The complexity makes future outcomes unforeseeable and effects of interventions hard to project if at all.
2.2 Order and Market Coordination

The economic order is not fixed over time as individuals’ goals, tastes, views, or knowledge and technology – in other words their ends and means – are subject to change. Additionally the underlying order may change through legislation. Austrian market process theory helps to understand how market coordination and therewith adjustment to changes can come about.

Suppose the initial stage is characterized by a high degree of order or as close to equilibrium. Then, a change in “means or ends” is disequilibrating. The degree of plan coherence is lowered. The disequilibrating change sets in motion adjusting changes that tend to bring the economy to its – ceteris paribus – final position (Machlup 1958). The final position is characterized by a higher degree of order.

From a subjectivist point of view, the individual’s adjusting changes are equilibrating at all time. “Equilibration refers to the systematic exploitation of profit opportunities as they exist in the understanding of market participants” (Selgin 1987, p. 38). Thus, profit signals coordinate the behavior of each individual. But as success of exploitation depends on ex-ante plan coherence with other market participants, acting upon such signals (the induced adjusting changes) is not a sufficient condition for a tendency towards a high degree of order. Unless we assume complete information of market participants and that they are able to coordinate plans perfectly, adjusting changes may induce further adjusting changes of other people. They can lower the degree of order.

The tendency towards a high degree of order “requires the understanding of other people’s motives and intentions” (Selgin 1987, p. 27) and the ability to form correct expectations of plans of others (which are subject to change). The quality of such prediction depends on knowledge (Hayek 1964, p. 334). To form correct expectations individuals can

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12 Legislation may also reflect the former. Thus, it does not have to be exogenous if e.g. institutions are built from bottom up.
learn about preferences of others from their past actions. But past actions do not necessarily reveal future actions in a world of ever-changing “means-ends” constellations. Thus, individuals can recognize past patterns but signals of profit and loss may be misleading. Hence, expectations are endogenous to individuals’ environment and restricted by knowledge (Butos and Koppl 1993; O’Driscoll and Rizzo 1996).

Even the acquisition of new knowledge in the process of market adjustment to past changes may set in motion new endogenous changes in “end and means” as actors learn over time and changes in knowledge can foster the need for further adjustments (Lachmann 1986; O’Driscoll and Rizzo 1996, pp. 71-76). Thus, the economy is subject to “ever-reemerging inefficiencies” (Benink and Bossaerts 2001). A state of rest is the exception, and not the rule. A final rest cannot be achieved as new “disturbing factors” will always occur (Mises 1998, p. 245).

Lewin (1997, p. 251) suggests that the very tendency towards plan coordination hinges on the knowledge type that is necessary to form expectations about future developments (and thus individual plans of market participants). The success of plans can depend upon three different types of knowledge: (1) the laws of nature, (2) the knowledge on social institutions and (3) knowledge of historical events that allow tracing implications from such changes (Lewin 1997).

Following Lewin (1997) the knowledge of type (1) comprises general principles related to the world like physical law, basics of medicine and so on. Knowledge of type (2) includes rules of behavior, standard categories, habits and customs. Knowledge of type (3) is knowledge of specific unique events. Thus, when plans depend on knowledge of type (1) and (2) the tendency towards plan coherence seems realistic. When plans largely depend on the

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13 Mises (1998, p. 244) argues that a “plain state of rest” is possible. He gives the example of a stock market that closes for the day and all participants that wanted to trade.

14 Hayek describes a tendency towards equilibrium but has not fully elaborated the causal generic process towards equilibrium in every detail (Rizzo 1990).
third type, they hinge on expectations that are based on knowledge of rare events. Plan coherence among individuals cannot be assumed.

Most changes are – of course – small. Then plans depend on type (1) and (2) knowledge. Learning is not problematic as most remains unchanged and in order. Thus, in a rivalrous competitive market with little changes in general rules expectations can be rather coherent (Butos and Koppl 1993). The adjustment towards a small change in data is hardly noticeable on an aggregate level. The order moves gradually. The long-run growth path is evidence of slowly orderly change (Lachmann 1976, p. 59).

An entrepreneur who acts upon ex-ante perceived profit opportunities can be seen as disequilibrating factor because the entrepreneur lowers the degree of order when the actions induce multiple adjusting changes in the market to reestablish plan coherence. For instance, we can imagine a gradual change if we consider the effects of a product innovation by a new entrepreneur who enters the market. The degree of order is only lowered on the margin until the adjusting changes reestablish plan coherence. The degree of order remains more or less unchanged.

Suppose, ceteris paribus, the entrepreneur enters the market and offers a new good of different quality as he perceives profit. This move is disequilibrating to the rest of the market and induces adjusting changes by competitors and consumers. Competitors and consumers coordinate production and consumption plans with respect to the changes in the set of possibilities and choices. The feedback process aligns the plans of consumers and producers.

If the new product is perceived to have better properties by consumers, the entrepreneur will profit. Others will sell less than they planned. Once they understand the reason they will adopt the innovation to arbitrage away the profit opportunities via imitation (Schumpeter 1983; Kirzner 1997). In this case, the diffusion of the innovation has a negative effect on sales of the old product. The old good is replaced by the new good to the extent that
customers’ choices adjust. Producers who fail to realize that consumers are less attracted to the old product run out of business or lose market share.

If the entrepreneur, however, erred in the sales projection and customers find the product to have worse properties, the entrepreneur’s plan fails the market test. “It is one of the chief tasks of competition to show which plans are false” (Hayek 1982, p. 117). Nothing changes for the competitors as consumers do not change consumption plans and replace their products with the new product. The entrepreneur loses. The losses signal past mistakes. Finally the entrepreneur does not offer the product anymore. Plan coherence is reestablished.

3 Order and Cycle
3.1 Displacement and Cycle

The larger the changes in means and ends the more they affect the degree of order and the longer takes the process of plan coordination. Based on Lewin (1997) a large change – we will refer to this as displacement - would require planning to depend heavily on newly formed expectations derived from historical knowledge of e.g. extreme events. In this situation, expectations (which are endogenous) cannot be formed properly in line with a rule or habit (knowledge of type 1 and 2) which would cause markets to be stable and expectations to be coherent (Butos and Koppl 1993).

Successful action depends on being able to guess the plans of others. If the displacement is too drastic, individuals have no understanding of whatsoever is going to happen and therefore no means to form plans. There is no structure or knowledge to base expectations on. Hence, plan coordination is impossible until ignorance has been resolved and an understanding of the new situation is developed.

Some knowledge is necessary. If agents base plans on knowledge of type 3, they have rather an intuition about the “correct” course of action. The degree of uncertainty over future
events is high when market participants have to depend on knowledge of type 3 to form expectations to plan actions. A higher degree of uncertainty prolongs the final adjustment process as it leaves more room for mistake. Coordination becomes problematic. Thus to create a new order based on limited knowledge may be an almost impossible task in the short-run. Only when changes are actually understood coordination sets in and a higher degree of order or plan coherence results. Then the long-run effects of the displacement are “priced in”.

If a displacement creates uncertainty about the long-run development, expectations are elastic with respect to the change (Lachmann 1943) so that – in line with Kindleberger (2000, p. 38) – displacements can become the starting point of a business cycles. Following Kindleberger (2000, p. 38) a displacement that “changes horizons, expectations and profit opportunities” of market participants is a key trigger of cycles.\(^\text{15}\) A business cycle then reflects the adjustment process towards a higher degree of order. Over the course of a cycle individuals deal with the planning problem caused by a displacement and the uncertainty it creates.

3.2 Types of Displacement

We can think of displacements to occur in both the underlying and the emerging order. For the former, Lewin (1997, p. 256) finds that institutions are important to coordinate plans. He argues that if institutions changed rapidly, the society “would be devoid of any perceptible order”. Kindleberger (2000, p. 38) argues that displacements are often political events such as wars, revolutions or changes in the political system. Such exogenous displacements affect the underlying order.\(^\text{16}\)

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\(^{15}\) We use the wording different from Kindleberger (2000), however, who only addresses exogenous change. We include large endogenous change brought about by some market participants that are seen as displacement by other market participants.

\(^{16}\) Endogenous displacements in the underlying order are hard to imagine. We define displacements as dramatic changes. Institutions may of course be formed bottom up or go through gradual change.
Second, real or financial innovations and significant policy interventions are displacements within the emerging order. For instance Koppl and Yeager (1996) find that “Big Players”, such as policy makers (here the Russian czars), can weaken the ability of market participants to price assets. Discretionary policy is an exogenous displacement if it strongly increases uncertainty over the long-run development. Further if policy measures are highly unpredictable they may receive a lot of attention and make expectations volatile. This can induce speculation and herding as the “reliability of expectations” is reduced (Koppl and Yeager 1996, p. 68).

Apart from exogenous displacements, there can be endogenous displacements to the emerging order. Argues Kindleberger (2000, p. 21): “Macroeconomics remains incomplete, even when it brings in production and prices […] if it leaves out the instability of expectations, speculation, and credit and the role of leveraged speculation.” Minsky (2008, pp. 230-235) suggests that lower interest rates may induce speculation. Risky financing hinges on the expectation that interest rates remain low. Further the Minsky-Kindleberger story has financial innovations at its core. Financial innovation has an impact on expectations of other market participants and may allow financing of more or different projects.

Another endogenous displacement is rapid technological change. Lachmann (1943, p. 23) argues (in line with Schumpeter 1983 and Hayek 1976, p. 95) that technological (real) innovations can be “an explanation why elastic expectations should be prevalent” that may trigger a cycle. From a Hayekian viewpoint such disequilibrating innovations are the result of the competitive market process itself in which entrepreneurs try to find and create new opportunities to profit (Hayek 1969).18

Following Kindleberger (2000) and Chancellor (2000) the long history of financial crises reveals that financial markets are inherently unstable and prone to crisis. Financial or

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17 Policy interventions based on rules in the underlying order. For instance central banks are made institutions that leave room for various policy interventions.
18 See O’Driscoll and Rizzo (1996, Chapter 6) for further discussion.
real innovations are followed by buoyant credit expansion that brings about manias, panics and crises.

For instance the Mississippi Bubble of 1719-20 started with high government debt. John Law proposed to take over the debt. To finance it, he sold shares to stock holders. The state securities provided an insurance and income stream for the Mississippi Company. This helped financing oversea expansions in search for profits. As the stocks were overinflated and profits lower than expected Law’s scheme finally failed (Chancellor 2000, Chapter 3; Neal 1993, Chapter 4; Baskin and Mirati 1999, Chapter 3).

The railroad mania of the 1840s on the contrary was caused by a technological innovation. Here, financial markets facilitated the industrialization by developing means to finance the spread of e.g. railroads in Britain and later in the US (Chancellor 2000, Chapter 5; Baskin and Mirati 1999, Chapter 4). In both cases state privileges and monetary expansion facilitated the boom.

4 Displacements and Recurring Business Cycles in Recent History

We apply the concept of an ever-changing order to interpret recent financial history. The frequently recurring boom-and-bust cycles are interpreted as adjustment processes towards newly emerging orders fostered by a stream of financial and political displacements that have raised uncertainty over the future again and again.

4.1 A New Era of Global Finance

Following the break-down of the Bretton Woods System a new international financial architecture emerged. In industrialized economies, floating exchange rates replaced adjustable pegs. Monetary policies became independent from one another. Thus – in terms of Mundell’s
Incompatible Trinity – the industrialized world went from one corner solution with pegged exchange rates and more or less free capital mobility within an asymmetric world monetary system to a new corner solution with independent monetary policies and capital mobility at the expense of fluctuating exchange rates. The tie to gold was completely abandoned. Therewith the monetary system is one based on fiat currency proper since the 1970s (Eichengreen, 2008, p. 134-136).

The shift in architecture represented a displacement in the underlying order of the world financial system. It went along with a rising degree of globalization, perhaps marked by the return to liberalism in the late 1970s. Distrust in big government was widespread. In 1979 Thatcher came to power in Britain. In the US Reagan was elected in 1980. Taxes were cut, regulation was relaxed and barriers to trade were removed. The degree of openness increased (Chancellor 2000, Chapter 8).

In the 1980s the developing economies in Latin American and East Asian liberalized markets. In 1989 the fall of communism allowed for the integration of the Eastern European countries into the world financial system. Because factor mobility and trade reached the levels they had under the classical gold standard, the period is often characterized as Second Era of Global Finance (Bordo et al. 1999; Rajan and Zingales 2003).

The new financial architecture had implications on the emerging order. The emerging order became more spontaneous as liberalization allowed for substantial financial development. Following Borio and Disyatat (2011) the elasticity of the international financial system increased.

Computation in financial markets, internet, mobiles, handheld trading services and all kind of hedging instruments emerged. Such endogenous displacements made the new era heavily depend on information. Large sums can be transferred from one corner of the world to another from a cell phone. (Chancellor 2000, Chapter 8). Further investors and firms developed portfolio diversification strategies to insure against all sorts of risks. In corporate
finance, conglomerates, center firms and national champions gained importance as firms wanted to diversify their portfolios and aimed at profiting from synergies with other product lines. Leveraged buyout partnerships of financiers and entrepreneurs blended interests of stakeholders by financing larger acquisition of enterprises that could be sold in pieces later on (Baskin and Mirati 1999, Chapter 6). And emerging markets used the liquid US asset market as store of wealth to secure against risks. Financial markets – particularly in the US - grew rapidly (Caballero et al. 2008).

**Figure 2: Average Nominal and Real Interest Rate Trends of US, Germany and Japan**

Source: IFS (2012).

Because financial markets grew and absorbed liquidity, inflation rates remained low and real and nominal interest rates have had a downward-trend (Hoffmann and Schnabl 2011)
(Figure 2). The additional degree of freedom for financial markets is obvious as credit now correlates better with GDP than money (Schularick and Taylor forthcoming).

**Figure 3: Recurring Business Cycles**

Source: Based on Hoffmann and Schnabl (2011).

However, the increased elasticity of the credit system and globalization via diversification finance went along with a higher frequency of crises (Figure 3). On the one hand, developing countries experienced crises following capital account liberalization and integration into the world financial system (Demirgunc and Kunt 1998). On the other hand, financial innovations triggered cycles in advanced economies (Borio 2003).
4.2 Capital Account Opening

In the 1980s and 1990s the developing countries of Latin America, East Asia and Eastern Europe liberalized capital accounts. Capital account liberalization was intended to promote growth following the McKinnon and Shaw Hypothesis (McKinnon 1973). But liberalization was a significant exogenous displacement to the order. When policy makers decided to open up capital markets the institutional framework for investment decisions changed dramatically. We discuss the implications for the East Asian economies in the light of the order theory.

Let us assume that there was a state of order or plan coherence in the economies prior to liberalization. There was limited access to international capital. Figure 4 illustrates that the East Asian-5 (Indonesia, Korea, Malaysia, the Philippines, and Thailand) were relatively closed until 1980. Nominal interest rates were relatively high. Little foreign capital was invested in the economies. Investment activity was sluggish.

In the East Asian economies the degree of openness increased from the 1980s up to the East Asia crisis of 1997 (Figure 4). Profit opportunities from lending in world and investment in the Asian economies arose. As in the Hayekian framework the changes triggered a dis-coordination of plans of economic actors. Domestic and foreign entrepreneurs reorganized their investment and consumption portfolios according to their beliefs. In this situation there is hardly a reference point for the beliefs. A qualitative rather than a quantitative assessment of the effects of the displacement was possible – perhaps based on neoclassical growth theory and the expectation of convergence of capital stocks. Time was necessary to reveal ignorance about the new situation by acquiring knowledge and coming up with new rules of thumb and a general understanding of the impact of the underlying change.

Thus, after capital account liberalization in the Asian-5 massive capital inflows were observed. Pegged exchange rates to the dollar seemed to allow for maturity mismatches using foreign currencies and implicit state guarantees in the case of a loss contributed to over-
optimism. Particularly after 1990 (Figure 5), when Japan faced a severe crisis (Figure 3, Japan) and lowered interest rates (Figure 2) foreign capital was readily available. This increased the relative profitability of the East Asia economies so that investors funneled additional capital to East Asia (Figure 5). Capital inflows squeezed interest rates from 1990 to 1995 (Figure 6).

**Figure 4: Degree of Capital Account Openness of the Asian-5**

![Figure 4: Degree of Capital Account Openness of the Asian-5](image)

Source: Chinn and Ito (2009).
Figure 5: Financial Accounts of the Asian-5

Source: Own Calculation, IFS and WEO (2012).

Figure 6: Average interest rate for Asian-5

Source: Own Calculation, IFS (2012).
In line with the Hayekian framework, banking institutions saw the obvious profits only. They were ignorant about the risks. Following Radelet and Sachs (2000, p. 154) during the upswing of the Asian-5 “managers of banking institutions often lack the expertise to manage risk appropriately when new lending opportunities open up after financial liberalization”.

Instead, the heavy capital inflows into the economies indicated that foreign investors and banks intended to reallocate resources to the seemingly most efficient use and to diversify the international investment position properly. But as many investors acted upon similar signals, profit signals turned out to be ex-post wrong.

Over-borrowing and overinvestment emerged (McKinnon and Pill 1997). Stock markets hiked (Figure 3, Malaysia). As declining interest rates were not a saving incentive, both consumption and investment surged. While the low capital stock promoted investment in capitalistic industries, consumer goods were in high demand. Current account deficits were the consequence.

The degree of order was low because plans were based on false expectations and prone to fail. Here, too many investors tried to profit from the same kind of investment and banks had incentives to provide credit when losses seemed to be implicitly covered and risks were unknown. In the end, returns turned out lower than expected.

When it became clear that returns in other kinds of investment are relatively higher, investment portfolios were reconsidered and good plans were separated from bad plans. In the East Asian crisis of 1997-98 overcapacities and mal-investment in the real estate sector were revealed that led to a substantially different evaluation of the fundamentals. Investment expectations reversed.

The losses in East Asia led to a general capital flight. The stock market broke down when investors withdrew capital from misplaced investment. Figure 5 illustrates the reversal of capital flows. Since there was much uncertainty, the past losses induced over-pessimism.
Too little was invested in the newly liberalized economy than what was in line with ex-post plan coherence. From 1997 – 2001 net capital flows were negative (Figure 5). The order was unstable because investors were ignorant of the investment opportunities.

Given underinvestment, returns on investment rose. Investors failed to make the profits they could have made in East Asia and adapted to the new situation. Having accumulated much knowledge over the latest boom-and-bust cycle, investment decisions became more and more accurate (ceteris paribus). A higher degree of order was achieved via learning. Thus, while crises followed liberalization the amplitude of cycles fell with the distance to liberalization (Kaminsky and Schmukler 2008).

Similarly policy makers and academics reacted to financial crisis following liberalization. For instance McKinnon (1993) and Edwards (2009) emphasize that liberalization should be done on the margin and in certain sequences. Gradual liberalization circumvents a large displacement. The authors argue in favor of slow liberalization at the benefit of a smooth transmission. The long-run implications in terms of financial development and growth are seen as rather positive.19

Policy makers on the contrary often believe that they allowed for too much of a “good thing”. Therefore, following crisis they often restrict markets using some sort of capital controls. In Figure 4 the Chinn-Ito index falls after 1998. The policy interventions may have been a new displacement if effective. However, there are serious doubts that capital controls have had any effects in East Asia (Reinhart and Reinhart 1999).

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19 Traditional neoclassical theory suggests a positive effect of financial liberalization on growth. Empirical evidence supports this finding (Henry 2003; McKinnon 1993). However, Stiglitz (2003) and Rodrik (1998) provide evidence of no impact of capital account liberalization on growth.
4.3 Innovations

Significant financial or real innovation is a key displacement that affects the emerging order directly. While the recent dot-com bubble (Figure 3, Nasdaq) can be seen as caused by a technological displacement, the recent US subprime market boom (Figure 3, Nareit) is a new example of a financial innovation driven boom.

If we assume that the economy was in a state of order prior to the housing boom, competition fostered discoveries (Hayek 1969). Banks discovered new means of financing. Low quality loans were bundled to minimize risk and create a liquid asset that could be sold. The income stream allowed for additional lending.

Ceteris paribus, this allowed for a greater elasticity of the credit system. And ceteris paribus it was, because financial supervision and central banks did not take into account the changes. More credit could be supplied at the same interest rate. The discovery changed expectations of banks: On the one hand, financiers knew there were more profits to make. On the other hand, they did not have an understanding of the long-term impact of the innovations.

At the same time housing investment was reinforced by government. Thus demand for housing loans increased. Competing banks aimed at a high market share. Therefore, they financed additional investment projects. Bankers did not know whether other banks finance more projects as well and what kind of projects. If they did not go for the short-term profit, they would have been potentially taken over by other banks that expand business activity to increase market share, and lose. Further one expansion of a bank potentially created deposits of other banks and therefore further means for credit expansion (Hayek, 1929). Entrepreneurs

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20 Note that unlike in a Keynesian story of animal spirits in the Hayekian story, expectations are endogenous to the market process (O’Driscoll and Rizzo 1996, p. 211; Koppl and Butos 1993).
faced the same knowledge problem. Lower financing costs raised expectations of planned investment returns. Therefore, the housing sector boomed (Figure 3, Nareit).

Thus simultaneous credit expansion allowed for less lucrative or more risky projects to be financed than was possible before the creation of the bad-loan triple A assets. The quality of investment fell as is obvious from Figure 7. More subprime loans were in the market prior to the latest crisis.

Figure 7: Quality of Loans

![Figure 7: Quality of Loans](source: Mills and Kiff (2007).

When credit became easier, mal-signals were sent particularly to interest-rate sensitive financial markets and more capitalistic branches. In line with Minsky (2008, pp. 230-235) financing methods of durable consumption went from hedge to Ponzi finance as increases in interest rates were out of sight. On the other hand, there was no need to assume a change in consumer time-preferences either, which would be compatible with the shift towards financial markets expansion and housing construction at the expense of producing more consumer goods. Households took advantage of low interest rates and consumed more right away.
Figure 8 illustrates that saving rates were particularly low between 2004 and 2008 in the US. Durable consumption goods were in high demand during boom periods. Distortions as a consequence of a lower degree of plan coherence of consumers, investors and the financial sector were the consequence. The latest US boom can be characterized as one of mal-investment and overconsumption (Salerno 2011).

**Figure 8: US Saving Rate**

![Graph showing US saving rate from 1969 to 2009](image)


The implications of the mistakes were realized only with a lack. Inflationary tendencies followed from incoherence of consumption and investment plans. A raise in interest rates revealed that projects which depended on low financing costs were not really lucrative and too risky. Ponzi schemes burst. The bust endogenously followed from the boom.

High rates of investment in previous periods led to a further drop of investment as the capital was consumed to produce more goods during the boom. Expectations undershoot. The
market of derivates broke down as the upsides of the innovation were underestimated. A slump followed. Hence, ex-post boom periods are often associated with increased risk-taking and slumps with risk-aversion.

But in the long-run the impact of the financial discovery should be understood when the market process reveals the mistakes. Then a new order is reached. Indeed, the same instruments are still used today that were used during hey-days of the subprime market boom. Whether this is done more prudently, only the future can tell.

5 Conclusion

The paper has described business cycles within Hayek’s framework of order. We have argued that a business cycle is initiated by a displacement (large shift) that lowers the degree of plan coherence. Displacements can be endogenous (financial or technological innovations) and exogenous (e.g. policy alteration via artificially low interest rates, liberalization, war). When economic actors lack an understanding of the impact of the displacement, they cannot form coherent expectations that are necessary for correct planning. A cycle emerges out of malcoordination among actors. The deus ex machina that sets in motion the cycle in the standard Mises-Hayek cycle theory can be seen as a special displacement.

Our analysis has further intended to make sense of the Kindleberger-Minsky and early Hayekian view that instability is inherent in a competitive market economy. While exogenous displacements may be partly avoided by e.g. implementing policies on the margin (e.g. gradual liberalization as suggested by McKinnon (1993)), endogenous displacements such as discoveries or innovations are the result of the competitive market process.

Based on the Hayekian framework, to prevent the emergence of endogenously developed cycles would necessitate (1) superior knowledge of e.g. a policy maker who can
form expectations independent from the rest of the system or (2) to kill off the very innovative forces of the market.

Therefore we are cautious in our policy implications. The policy advice with respect to cycle prevention is that policy makers should beware of making things worse by causing themselves displacements and uncertainty.

References


