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FINANCIAL CYCLES AND MONETARY POLICY*

Abstract

Before the Global Financial Crisis, in both the dominant view and the econometric models used by central banks, finance was considered as being peripheral to the macroeconomic cycle. Borio and other scholars working at the Bank for International Settlements (BIS) made a major contribution to the theory of financial crises by highlighting how a financial cycle can impact on real variables. In particular, when a financial cycle overlaps with an expansive real cycle, banks may underestimate credit risk leading to a real estate and/or financial bubble that in the end may result in a financial crisis. The importance given by Borio to the financial cycle led him to suggest that monetary policy should support macroprudential policies aimed at ensuring financial stability.

Keywords: Financial Cycles; Global Financial Crisis; Monetary Policy
JEL Classifications: E30; E44; E50; G20

Riassunto

Cicli finanziari e politica monetaria

Prima della crisi finanziaria globale, nella visione dominante e nei modelli econometrici delle banche centrali, la finanza era considerata periferica rispetto al ciclo macroeconomico. Borio e altri studiosi della Banca dei Regolamenti Internazionali (BRI) hanno dato un contributo importante alla teoria delle crisi finanziarie, evidenziando come un ciclo finanziario possa avere un impatto sulle variabili reali. In particolare, quando un ciclo finanziario si sovrappone ad un ciclo reale espansivo, le banche possono sottostimare il rischio di credito, dando origine ad una bolla immobiliare e/o finanziaria, che, a sua volta, può sfociare in una crisi finanziaria. Data

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l'importanza attribuita al ciclo finanziario, Borio auspica che la politica monetaria sia di supporto alle politiche macroprudenziali volte a garantire la stabilità finanziaria.

INTRODUCTION

It is a genuine honour to deliver the Laudatio for Dr. Borio on this most memorable of occasions, the awarding of the Laurea Honoris Causa in International Relations.

Claudio Borio was born in Ivrea in 1957 but, thanks to his father's work as a senior executive in Olivetti, spent many of his formative years in Argentina. After his family's return to Europe, he moved to England to study *Politics, Philosophy, and Economics* at the University of Oxford, where he obtained his BA, and where he went on to earn his MPhil and DPhil in Economics.

From 1985 to 1987 he worked as an economist in the Economics and Statistics Department of the OECD, before moving on to join the Bank for International Settlements (BIS), where he spent the rest of his career.

Working in the Monetary and Economic Department he held positions of increasing responsibility until being appointed head of department in 2013. A position he held until his retirement on December 31, 2024.

As Benjamin Friedman noted in his speech at the Colloquium in Borio's honour, when Borio joined the BIS in 1987, monetary theory was characterized by certain well consolidated beliefs, including the assumption that individuals had rational expectations, that markets were permanently in equilibrium, and that money and finance were "neutral", i.e., had no influence on real macroeconomic variables.

In his four decades at the BIS, Borio not only influenced the thinking and working methods of that institution, but also contributed significantly to changing the way we think about money and finance and their links with the real economy.

Borio's scientific contributions are impressive both in number and in terms of their impact on various aspects of monetary and financial theory. In this brief presentation, I will touch on just a few of those aspects. In particular, I will focus on those parts of Borio's thinking that, perhaps, have had the greatest influence on monetary theory and policy.

DO BANKS INTERMEDIATE SAVINGS OR CREATE NEW PURCHASING POWER?

I will begin with Borio's answers to the age-old question: what is money and how is it created? In recent years, monetary theory on this topic has undergone profound changes. Concepts and theories that were and, indeed, continue to be taught in our university courses, such as the exogeneity of the money supply and the so-called loanable funds theory, are now subject to profound criticism and, indeed, revision.

As is well known, according to the theory of loanable funds, banks simply intermediate existing savings. Their lending activity begins with the collection of deposits and ends with the granting of loans to businesses and other entities. In short, it is the deposits that make loans possible, not the other way around.

In recent times, some economists have reconsidered the process of money creation and concluded that the loanable funds theory fails to adequately represent the financial system and its functioning in a modern economy. Borio, amongst others (see, for example, McLeay *et al.*, 2014; Jakab and Kumhof, 2015; Borio and Disyatat, 2011, 2015), highlighted that the loanable funds theory, being based on the idea that money is exclusively a means of payment, fails to consider the role of money as a financial instrument[1].

The loanable funds theory, as illustrated by Wicksell (1898), is based on the assumption that, in equilibrium, the monetary interest rate (i.e., the rate charged by banks) and the "natural" interest rate (i.e., the marginal return on investment) coincide.
Borio rightly observes that this equilibrium is only possible if, as in Wicksell's model, money is anchored to a commodity currency and, consequently, its supply is limited. But what happens if money has no anchor? (see Borio and Disyatat, 2011, pp. 29-30).

[1] As early as 1933, Keynes criticized those who neglected the financial functions of money, writing: "*Most treatises on the principles of economics are concerned mainly, if not entirely, with a real-exchange economy, and – which is more peculiar – the same thing is also largely true of most treatises on the theory of money. In particular, Marshall's is avowedly concerned with a real-exchange economy; and so, I think, is by far the greater part of the treatises of Professor Pigou – to name these English works on which I have been brought up and with which I am most familiar*" (Keynes, 1933).

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In this case, the monetary interest rate may remain below the "natural" interest rate and banks create additional credit to meet investment demand: the quantity of money is therefore entirely endogenous[2] (see Borio and Disyatat, 2011; p. 30).

REAL CYCLE AND FINANCIAL CYCLE OF THE ECONOMY

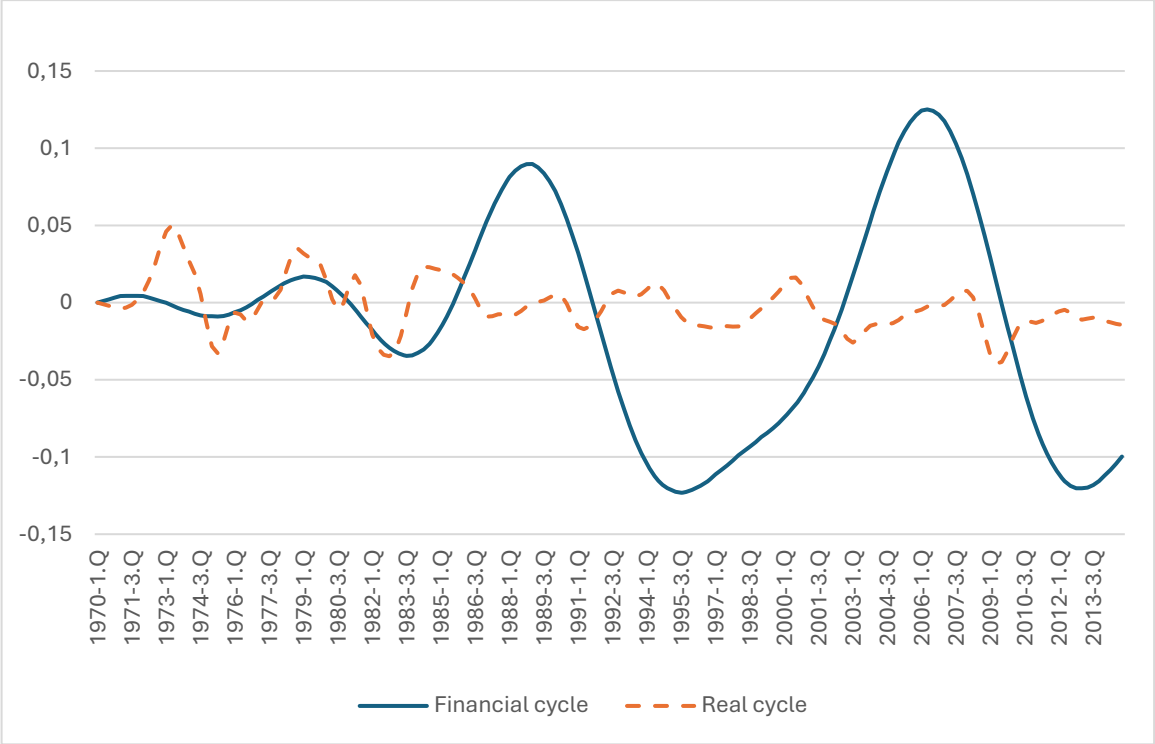
The idea that commercial banks, unlike other financial intermediaries, do not simply intermediate existing savings but create additional purchasing power allows Borio to distinguish between *saving* and *financing*. *Saving* for national accounting purposes is simply the portion of income that is not consumed. *Financing*, on the other hand, consists of the monetary resources utilised, including debt.

The distinction between *saving* and *financing* corresponds to that between the real cycle of productive activity and the financial cycle (see Borio, 2012; 2014a). The latter characterized by changes in the elasticity of the bank credit supply relative to the level of productive activity. A positive financial cycle encourages an increase in the price of securities and financial assets, and the contrary in the case of a depressive financial cycle.

Figure 1 compares the financial and real cycles in the United States since the 1970s, showing how the financial cycle is both longer and deeper than the real cycle.

[2] The positions that tend to compare Borio's monetary view with that of the post-Keynesians are therefore justified. However, this comparison is only partially true. Post-Keynesians conclude that money creation is entirely endogenous. In this context, the central bank has no way of influencing it (see Kaldor, 1989, and, above all, the position of the "horizontalists", such as Moore, 1988). For Borio, on the other hand, the central bank can vary the policy interest rate and thus regulate the demand for credit and the supply of money ("*The ultimate constraint on credit creation is the short-term rate set by the central bank …*". Borio and Disyatat, 2011, p. 30).

FIGURE 1 – *The Financial and Business Cycles in the United States*



Source: Drehmann *et al.* (2012).

THE 2008 FINANCIAL CRISIS: AN ALTERNATIVE INTERPRETATION

When a financial cycle overlaps with an expansive real cycle, as happened in the first half of the 2000s, banks are in danger of underestimating credit risk and the elasticity of credit supply tends to increase. Credit growth is accompanied by the emergence of a real estate and/or financial bubble and the end result tends to be a financial crisis.

The case of the Global Financial Crisis is emblematic. The emphasis on the interaction between the real cycle and the financial cycle allowed Borio and the BIS economists to predict the possibility of the subprime mortgage crisis earlier than others and also to challenge the then prevailing explanation of its cause.

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As early as 2002, Borio and Lowe had shown how rapid growth in financial imbalances, combined with pronounced credit expansion and a sharp rise in the prices of financial assets, would entail the risk of a financial crisis even in a context of stable prices (such as those prevailing at the time)[3].

In fact, in August 2003, at the annual conference organized by the Federal Reserve Bank of Kansas City in Jackson Hole, when the macroeconomic picture appeared stable, Borio, together with the then head of the BIS Monetary and Economic Department (MED), William R. White, highlighted what they perceived as the risks of instability and crisis[4]. These risks stemmed from the fact that, due to deregulation and greater elasticity of the credit supply in response to persistently low interest rates, financial imbalances could increase sharply, creating conditions for severe economic stress. They therefore highlighted the need to prioritize a monetary policy which aimed not only at stabilizing prices but also at safeguarding financial stability (Borio and White, 2004; p. 149).

As Borio himself described in an interview with *Il Sole 24 Ore* (June 17, 2017), Greenspan and Bernanke, then respectively Chairman and influential member of the Fed's Board, who were present at the conference, showed their disapproval of these remarks and expressed their clear dissent.
A few years later, however, the scenario outlined by Borio and White was dramatically confirmed by the subprime mortgage crisis of 2008.

According to the prevailing interpretation at the time, this crisis was due to an "excess" of global savings (*Global Saving Glut hypothesis*). The most widely accepted version of this hypothesis (Bernanke, 2005; Mendoza, 2007; Caballero *et al.*, 2008; Bernanke *et al.*, 2011) argued that the significant increase in savings in Asian and oil-producing countries was not matched by an increase in domestic demand for investment, resulting in a huge influx of capital into advanced economies, particularly the United States. In the "receiver" countries long-term interest rates fell, creating the conditions for high demand for credit, which in turn, led to the formation of a real estate bubble and forms of over-indebtedness.

[3] Bordo and Landon-Lane (2013) believe that the studies of Borio and Lowe (2002; 2004) and Borio and White (2004) incorporates the "Austrian" view of Hayek, von Mises, and Robbins, according to which an increase in the price of real estate and financial assets can degenerate into a bubble if an accommodative monetary policy allows uncontrolled growth in bank credit.
[4] See Borio and White (2004).

Based on *the Global Saving Glut hypothesis,* there can be no criticism of the accommodative monetary policy pursued by the Fed in the first half of the 2000s.

Borio and the BIS, however, offered a radically alternative explanation for *the Global Financial Crisis,* their explanation being based on the previously mentioned distinction between *saving* and *financing.* In particular, they explain that in the international monetary system, the distinction between *saving* and *financing* inevitably leads to a distinction between net and gross capital flows between countries. Net flows correspond to the current account balance, i.e., the amount of savings in a country, which can be positive or negative. Gross capital flows, on the other hand, have little to do with net flows, in fact, a country may have a balanced current account, and therefore net capital flows equal to zero, but at the same time have high gross capital flows, i.e., a large amount of foreign assets and liabilities.

Borio and Disyatat showed that in the years leading up to the *Global Financial Crisis*, changes in US financial assets and liabilities had little to do with the country's external account deficits[5]. China despite enjoying large current account surpluses with the US, contributed only modestly to the expansion of gross capital flows to and from that country. Europe, on the other hand, played a very significant role, particularly the euro area and the United Kingdom, despite having a relatively modest trade and current account surplus with the United States (Table 1).

From this perspective, US long-term interest rates were not so much influenced by inflows of funds from countries with current account surpluses, such as China, as by gross capital flows – in particular, the increase in financial assets from advanced economies, primarily Europe, to the United States[6].

Borio and the BIS's explanation of the *Global Financial Crisis*, unlike the *Global Saving Glut hypothesis*, throws into question the wisdom of the Fed's monetary policy stance in the first half of the 2000s. Given this alternative interpretation, the accommodative policy of the US central bank would have contributed to the formation of a real estate and financial bubble and the subsequent global crisis (Borio and White, 2004).

[5] See Borio and Disyatat (2011).

[6] Many banks in European countries borrowed short-term in dollars to purchase long-term US securities and derivatives. They profited from the differential between long-term asset yields and short-term interest rates.

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TABLE 1 – *Gross and Net Capital Flows in the United States and Trade Balance (Billions of Dollars)*

	Capital inflows into the US	Capital outflows from the US	Trade balance
Total	2,129.5	1,472.1	-808.8
Eurozone	360.3	477.2	-110.2
United Kingdom	561.0	422.4	-6.9
China	260.3	-2.0	-258.5
Japan	65.9	-50.0	-84.3
Canada	83.5	67.9	-68.2
OPEC	52.1	19.2	-117.2

Source: Johnson (2009) and US American Census.

MONETARY POLICY MANAGEMENT AFTER THE GLOBAL FINANCIAL CRISIS

According to Borio, the experience of *the Global Financial Crisis* suggests that monetary policy should be conducted not only in accordance with rules aimed at maintaining price stability, but also with *macroprudential* policies aimed at ensuring financial stability (Borio and Zhu, 2008; Borio and Disyatat, 2009; Juselius *et al.* 2016; Borio, 2014b). Hence the need for central banks to follow rules, such as *inflation targeting*, with flexibility (see Borio, 2024). In fact, monetary policy cannot react only to deviations of inflation from the target. It must also be able to prevent financial cycles which, characterized by abnormal credit growth, can lead to financial or real estate bubbles even in a context of stable prices.

Through his work, Borio has not only contributed to improving monetary theory, in particular the theory of financial crises, and influenced the policies that central banks follow, but has also contributed to a rethinking of the regulatory framework for banking: the Basel III and IV international agreements have placed severe restrictions on banks' ability to engage in uncontrolled credit growth, thereby reducing the risk of bubbles and financial crises.

In conclusion, Borio's work represents an important contribution to improving the well-being of the international community and preventing the social and economic costs inevitably associated with financial crises.

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