

# Reviving Keynesianism: the modelling of the financial system makes the difference

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*Keynesian economics is not dead. Instead, it is in a similar condition to Sleeping Beauty after she pricked her finger on the spindle. A large hedge of thorns has been laid over the original Keynesian building so that it is hardly recognizable today. Keynesian economics has suffered from a failure to sufficiently identify the core of the Keynesian revolution. This paper argues that the core concerns the distinction between real and monetary exchange economies, and that a proper understanding of money's role requires identifying the mechanisms of the financial system. Doing so reveals the fundamental incompatibility between real and monetary analysis.*

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## 1 INTRODUCTION

Keynesianism is not dead. But it is in a similar condition to Sleeping Beauty and her royal court after she pricked her finger on the spindle. A large hedge of thorns has been laid over the original Keynesian building so that it is hardly recognizable today.

Keynesian economics suffers from the fact that the core of the Keynesian revolution has never been made sufficiently clear. In his writings, Keynes did not elaborate the revolutionary insights clearly enough. This allowed his contemporaries and subsequent economists to present Keynesianism as a special case of a general theory. In the so-called Neoclassical Synthesis, Keynesianism was reduced to a theory for the short term with rigid prices.

This shortcoming has caused massive damage to the science of economics. Imagine in physics the Copernican Paradigm being presented as a special case of Ptolemy's Paradigm. It is therefore important to recognize Keynesianism as an independent and fully fledged paradigm. This requires that its 'dominant causal mechanisms' (Rodrik 2015) must be identified. It must be shown that the Keynesian Paradigm is incompatible with the Classical theory and that it is the only adequate representation of reality, where money and the financial system are as crucial for the functioning of the economic system as blood and its circulation is for the human body. This agenda corresponds to the ambitions of Keynes, who wrote in the very first paragraph of *The General Theory*:

I shall argue that the postulates of the classical theory are applicable to a special case only and not to the general case. ... The characteristics of the special case assumed by the classical

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theory happen not to be those of the economic society in which we actually live, with the result that its teaching is misleading and disastrous if we attempt to apply it to the facts of experience. (Keynes 1936 [1973], p. 3)

This leads to the question of what constitutes the revolutionary core of his theory. Keynes has formulated it as follows:

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 true of most treatises on the theory of money. ... The theory which I desiderate would deal, in contradistinction to this, with an economy in which money plays a part of its own and affects motives and decisions and is, in short, one of the operative factors in the situation, so that the course of events cannot be predicted, either in the long period or in the short, without a knowledge of the behaviour of money between the first state and the last. And it is this which we ought to mean when we speak of a monetary economy. ... Everyone would, of course, agree that it is in a monetary economy in my sense of the term that we actually live. ... The idea that it is comparatively easy to adapt the hypothetical conclusions of a real wage economics to the real world of monetary economics is a mistake. (Keynes 1933, p. 408)

This differentiation was adopted later on by Schumpeter (1954, p. 264), who speaks of ‘real analysis’ (RA) and ‘monetary analysis’ (MA):

- *Real Analysis* proceeds from the principle that all the essential phenomena of economic life are capable of being described in terms of goods and services, of decisions about them, and of relations between them.
- *Monetary Analysis* introduces the element of money on the very ground floor of our analytic structure and abandons the idea that all essential features of economic life can be represented by a barter-economy model. Money prices, money incomes, and saving and investment decisions ... acquire a life and an importance of their own, and it has to be recognized that essential features of the capitalist process may depend upon the ‘veil’ and that the ‘face behind it’ is incomplete without it.

But Keynes and Schumpeter did not elaborate the differences between the two paradigms in a detailed and systematic way. Obviously, they are related to the *neutrality of money axiom*. Davidson (2007, p. 29) explains this as follows:

Once the neutrality of money is rejected as a necessary axiomatic building block, then an organizing principle for studying the level of employment and output in a market economy involves: (1) comprehending the role of money as a means of settling contractual obligations and (2) understanding the essential role that liquidity plays in determining the flow of production and employment in the economic system in which we live.

We will argue that for a proper understanding of the role of money the mechanisms of the financial system in the two paradigms must be identified. This makes it possible to elaborate the key differences between RA and MA. The mechanics that we describe are not entirely new,<sup>1</sup> but a comprehensive and systematic comparison is lacking. It shows not only the incompatibility of the paradigms but also the lack of reference to reality of the Classical Paradigm. As these differences exclude any synthesis of RA and MA, the Neoclassical Synthesis must be rejected.

1. See for example Bertocco (2007; 2014), Borio and Disyatat (2015), Lindner (2015) and Jakab and Kumhof (2019).

Section 2 discusses real analysis. It is based on the critical assumption of a general-purpose good (GPG) that can be used interchangeably as a consumption good, an investment good and a financial asset. As a result, financial transactions are identical to real transactions (consumption/saving and investment). The financial system is a camouflaged goods market. Banks and other financial institutions are mere conduits for the GPG. The flow of funds is a *one-way flow* from savers to investors.

Section 3 describes the basic mechanisms of monetary analysis. The funds circulating in the financial system are sight deposits (money). This gives banks, as the only institutions that can produce money, a key role in MA. The capital market is different from banks as it redistributes funds that can be used in a revolving way. Financial transactions are separate and often independent from real transactions. Saving of households redistributes the existing money stock to the detriment of the liquidity and the profits of the corporate sector. Funds flow from banks and investors to surplus units. When the funds are used for new investments they flow back to the financial market. The flow of funds is circular.

In Section 4 the IS–LM model is used to describe the mechanisms of MA. With the LM curve, the model is equipped with an independent financial system. Banks can create loans autonomously. Financial investors can invest their funds with banks or the capital market. As a monopolistic supplier of reserves, the central bank controls the interest rate. The coexistence of the LM curve with the IS curve does not imply neutrality of money. Rather, the financial sphere dominates the real sphere. The IS curve shows that saving and investing cannot determine an equilibrium interest rate on their own. They are equilibrated by aggregate demand.

Section 5 discusses syntheses of the two paradigms. The Neoclassical Synthesis considers MA as a theory for the short term with rigid prices and unemployment, and RA as a theory for the long term with flexible prices and full employment. But it is not explained how the mechanisms of the financial system can be determined by the level of the unemployment rate or price rigidities. The synthesis by Wicksell (1936) suffers from a similar problem. He assumes that it is the level of the nominal interest rate relative to the natural rate that determines the mechanisms of the financial system. Attempts by Hicks (1937) and others to derive the IS curve from the I/S schedule must be rejected as they assume that both paradigms are identical.

Section 6 concludes the article by discussing the potential and the need for a reawakening of true Keynesianism.

## 2 THE FINANCIAL SYSTEM IN REAL ANALYSIS

The theoretical core of RA is provided by the Classical interest-rate theory. It is often referred to as the loanable funds theory (Lindner 2015; Jakab and Kumhof 2019). This theory was shaped by Böhm-Bawerk (1890) and Fisher (1930). It is based on the idea that the analytical framework for the *intra-temporal exchange* of goods can be applied to the *inter-temporal exchange* on the financial market. In the words of Fisher: ‘The theory of interest bears a close resemblance to the theory of prices, of which, in fact, it is a special aspect. The rate of interest expresses a price in the exchange between present and future goods’ (Fisher 1930, sec. II.IV.3).

The decision of consumers between present and future goods depends on their time preference. Consumption today has a higher value than consumption tomorrow. The decision of an investor depends on what Fisher calls ‘investment opportunity’. Böhm-Bawerk (1921, p. 1) speaks of the ‘incremental productivity of greater roundaboutness of production’. A good invested today generates a positive return tomorrow.

## 2.1 A financial system with a general-purpose good

The crucial assumption of this theory is almost never made explicit. It is assumed that the financial system can be modelled with a single general-purpose good (GPG) which can be used interchangeably as:

- a *consumption good*;
- a *financial asset*, if it is saved and becomes available as a supply of funds;
- an *investment good*, if it is demanded by an investor; and
- an *output of the investment process* for consumption in the future.

Fisher considered this simplification unproblematic: ‘We may define the rate of interest as the per cent of premium paid on money at one date in terms of money to be in hand one year later. Theoretically, of course, we may substitute for money in this statement wheat or any other sort of goods’ (Fisher 1930, sec. 8).

This assumption has far-reaching implications. As financial flows are flows of GPGs, they are identical to real flows. Financial decisions are identical to real decisions:

- The *saving decision* (the mirror image of the consumption decision) is identical to the decision to supply the GPG as ‘funds’ on the financial market.
- The *investment decision* is identical to the decision to demand the GPG as ‘funds’ on the financial market.

Thus, investment is possible only if consumers are willing to abandon consumption, that is, to save the GPG. The paradigm leaves no room for genuine financial transactions that are independent or least separate from saving/consumption or investment decisions. Financial transactions cannot ‘acquire a life and an importance of their own’ (Schumpeter 1954, p. 265). For RA the assumption of the GPG is a ‘critical assumption’ (Rodrik 2015, p. 27): ‘We can say that an assumption is critical if its modification in an arguably more realistic way would produce a substantive difference in the conclusions produced by the model’.

A main implication is the concept of a *unique real or natural interest rate* which can be calculated as the relation of the amount of the GPG available tomorrow relative to one unit of the GPG today. With more than one commodity, several such real rates would exist (Rogers 1989, p. 43).

The *financial flows* in this paradigm are characterized by a *one-directional flow* that starts in the household sector (Figure 1). Saving is the source for funds that flow to investors, where they are absorbed as input for the investment process. The transmission

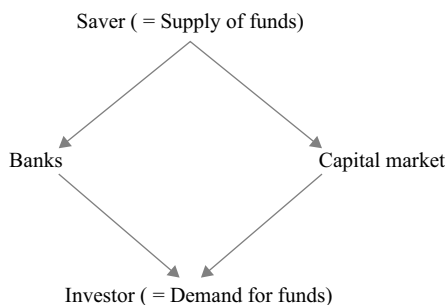


Figure 1 Flow of funds in RA

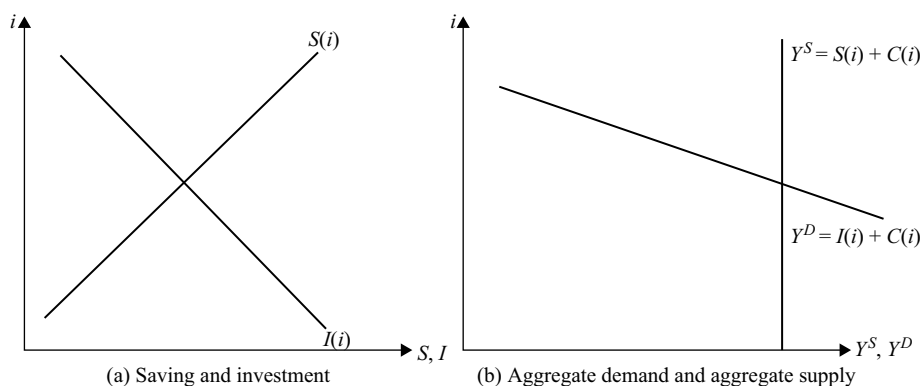


Figure 2 Saving and investment in RA

from savers to investors can be facilitated by banks or the financial markets. As intermediaries are unable to produce or consume the GPG, they are mere conduits. In this regard, banks and other financial intermediaries are identical. In the words of Gurley and Shaw (1955, p. 521): ‘Neither banks nor other intermediaries create loanable funds’.

Graphically, the financial market can be represented in a simple demand/supply diagram (Figure 2) with saving as supply of funds and investment as demand for funds. In this model, a higher propensity to save increases the supply of funds. The supply schedule shifts to the right. This leads to a decline of the interest rate and an increase of investment. Thus, saving causes investment. This is the ‘dominant causal mechanism’ of RA.

This simplistic view still shapes the advanced dynamic stochastic general equilibrium (DSGE) models. For example, a survey by Claessens and Kose (2018, p. 51) notes: ‘In many of these models, however, financial intermediation is largely irrelevant because there are no financial frictions. This means, in turn, that important channels by which interest rate changes could affect the real economy are left out’.

This reflects the fact that in recent theoretical work the financial system is not even treated as a conduit facilitating the flow funds, but as a ‘friction’ for the financial flows between savers and investors (Woodford 2010).

## 2.2 Financial market equilibrium as a goods market equilibrium

The commodity logic of RA becomes obvious if one realizes that saving is a mirror image of consumption. In the words of Keynes (1936 [1973], p. 64): ‘Clearness of mind on this matter is best reached, perhaps, by thinking in terms of decisions to consume (or to refrain from consuming) rather than of decisions to save’.

In RA, aggregate income and aggregate supply ( $Y^S$ ) are independent of saving and investment. Thus, the consumption function is:

$$C(i) = Y^S - S(i). \quad (1)$$

Aggregate supply is:

$$Y^S = C(i) + S(i). \quad (2)$$

Aggregate demand ( $Y^D$ ) is the sum of consumption and investment:

$$C(i) + I(i) = Y^D. \quad (3)$$

Thus, an excess of planned saving over planned investment

$$S_{ex\,ante} > I_{ex\,ante} \quad (4)$$

is identical with an excess of aggregate supply over aggregate demand:

$$Y^S > Y^D. \quad (5)$$

The saving and the investment schedules of RA can be transformed into a diagram with aggregate supply (AS) and aggregate demand (AD) determined by the interest rate (Figure 2).<sup>2</sup> The AS curve is vertical, as a higher interest rate increases saving and reduces consumption by the same amount. The AD curve has a negative slope as investment and consumption both increase with a lower interest rate. The slope of the AD curve is flatter than the slope of the I curve, which reflects the joint effect of interest-rate changes on investment and consumption.

Thus, the financial market presented of RA is a camouflaged goods market where equilibrium between aggregate demand and aggregate supply for the GPG is achieved by the interest-rate mechanism. The financial sphere is a mirror image of the real sphere (Bertocco 2007).

### 2.3 The role of money and the central bank

In the world of RA, there is no room for money. With only one good, *intratemporal trade* is not possible and money as a means of exchange is not needed. The GPG can be measured in units of weight, for example kilograms. Attaching a price to this, for example two Taler per kilogram, would only create another unit to express weight (Rogers 2014). As a consequence, the concept of a price level is also meaningless.

Thus, in RA, the neutrality of money means not only that money has no effects but rather that there is no role for money at all. Accordingly, the central bank is completely superfluous. The strong influence of this paradigm until today became obvious in the discussion on the causes for the decline of interest rates since the 1980s which did not take into account the influence of the central bank's policy on interest rates (King and Low 2014; Rachel and Smith 2017).

## 3 THE FINANCIAL SYSTEM IN MONETARY ANALYSIS

The financial system of MA differs from the financial system of RA as it gives up the artificial concept of the GPG. It uses at least four assets:

- a *consumption good* which is not a substitute for an investment good;
- an *investment good* which can be an existing real asset or a newly created real asset;
- *money*, that is, sight deposits held with banks which are the 'funds' that are created by banks and intermediated by the financial system; and
- *bonds*.

2. This was already detected by Myrdal (1933) and by Siven (2006).

The use of money as a key financial asset ('funds') has the effect that in MA financial transactions are separate from real transactions. They can be related to real transactions, but they can also be completely disconnected. The *independence of the financial sector* from the real sector is the decisive difference between a world where money is neutral and where it is not neutral. This independence does not imply neutrality of money. Rather, it implies a dominance of the financial sphere over the real sphere.

### 3.1 Financing: the supply side of funds

In MA (and of course in reality), financing means the provision of sight deposits with a bank for a certain period of time. For example, if an investor wants to buy a house and finances it with a mortgage supplied by a bank, he/she is credited with the required amount on his/her bank account. Deposits are created by the act of lending. As banks are the only institutions that can produce these funds by lending, they have a pivotal role in MA. Accordingly, the role of the capital market differs as it lacks the ability to create funds. Its role is the redistribution of existing bank deposits. As the supplier of central-bank money (reserves), which are the main input for the credit creation of banks, the central bank has a dominant role in MA.

These key insights were already expressed by Keynes (1937a, p. 664), but unfortunately not in *The General Theory*: 'Thus the terms of supply of the finance required by ex-ante investment depend on the existing state of liquidity-preferences ... in conjunction with the supply of money as governed by the policy of the banking system'.

In the economic literature, there has been a long debate about whether banks are intermediaries or manufacturers of funds (Werner 2014). The fact that such a fundamental question has remained unresolved for decades is a symptom of the confusion which has been created by the coexistence of RA and MA. In the following, only the basic mechanics of credit and money creation will be described. Detailed presentations can be found in Bofinger (2001), Disyatat (2011), McLeay et al. (2014), Deutsche Bundesbank (2017) and Jakab and Kumhof (2019).

The mechanics of the process of credit creation by banks are simple. Whenever a bank offers a loan, a new deposit is created. The asset side and the liabilities side of the balance sheet increase in tandem. That loans create deposits is a dominant causal mechanism of MA. This is different in RA, where deposits create loans.

The ability of banks to create deposits *ex nihilo* does not imply that money is endogenous, that is, not under the control of the central bank. From the perspective of an individual bank, it is very likely that the new deposits it has created by lending will be transferred to another bank. It is also possible that a customer uses a loan for a cash withdrawal. In both cases, the bank which provides a loan experiences a loss of liquidity as its central bank reserves decline. Thus, in the world of MA, financing does not require an abandonment of consumption, it implies an abandonment of liquidity.

A bank must refinance the loss of liquidity by borrowing either directly from the central bank or from other banks on the money market. As monopolistic supplier of reserves, the central bank can control the short-term money-market rate (for example, the Federal Funds rate or EONIA) perfectly with its instruments. This rate determines the refinancing costs of banks, which are a decisive factor for the loan rates of banks. Thus, the central bank can indirectly control the process of credit/money creation by variations of its policy rate (Bofinger 2001).

In MA, capital markets are an important supplier of financing. But, as they lack the ability to generate funds, their role is limited to the redistribution of money balances that have been created by banks. In this regard, the role of capital markets as an

intermediary is not fundamentally different from their role in RA. But the intermediation does not take place between savers and investors. It takes place between money holders that are willing to give up liquidity temporarily and borrowers that need liquidity, but not necessarily for new investments.

An important difference between RA and MA concerns the ability of capital markets to perform a *multiple credit creation*. In RA, the GPG is transferred to an investor where it is used as an investment good. The GPG, in its manifestation as a financial asset, gets absorbed in the investment process and is no longer available for other investors.

In MA, the financing transaction – that is, the provision of money balances from a bank – is not identical to the investment transaction, for example the purchase of a car from a car dealer. Typically, the funds that are supplied to an investor are spent immediately as he/she wants to avoid the costs of borrowing at a high lending rate and keeping funds at a low deposit rate. Thus, the funds for the financing of a project become immediately available for new lending (Biefang-Frisanco Mariscal and Howells 2011). The potential to use a given amount of money for multiple capital market financing was emphasized by Keynes (1937b, p. 247):

Credit, in the sense of ‘finance’, looks after a flow of investment. It is a revolving fund which can be used over and over again. It does not absorb or exhaust any resources. The same ‘finance’ can tackle one investment after another. But credit, in Prof. Ohlin’s sense of ‘saving’, relates to a stock. Each new net investment has new net saving attached to it. The saving can be used once only.

Basic elements of a theory of the supply of funds on the capital market can be found in the theory of liquidity preference developed by Keynes (1936 [1973]), especially the speculative motive. It concerns the decision of an investor to hold his financial assets in the form of short-term deposits (money) or bonds (‘consols’). In this theory, the supply of funds on the bond market is mainly determined by interest-rate expectations.

In RA the central bank is completely absent. The GPG that is traded on the financial market can be neither supplied nor used or destroyed by the central bank. In contrast, in MA the central bank is the most powerful player in the financial system. As already mentioned, this derives from its monopoly over the issuance of central-bank money. With its control over short-term interest rates, the central bank can indirectly control the lending rate of commercial banks.

In addition, short-term interest rates and expectations over the path of the policy rates in the future have a strong impact on interest expectations. This effect can be reinforced by the strategy of ‘forward guidance’, where central banks make commitments on the future path of the policy rate.

Finally, the central bank can also directly generate new bank deposits. This is the case if it buys bonds from non-banks in ‘quantitative easing’ programs. The seller of the bonds is credited the amount on its bank account so that their money holdings increase. The central bank credits the central-bank account of the seller’s bank, which increases the monetary base.

In sum, in MA, financing is completely disconnected from contemporaneous household saving. Financing does not require an abandonment of consumption, it requires an abandonment of liquidity:

- A bank that is providing a loan experiences a reduction of its reserves with the central bank.
- A financial investor that buys bonds experiences a decline in their money balances held with a bank.



### 3.2 Financing: the demand side of funds

In RA, financing transactions and investment transactions are identical. The funds demanded by investors are used without modification as the single input for the investment process. In MA (and also in reality), financial transactions and the investment transactions are separate. An investor who wants to buy a house makes two separate transactions:

- He/she takes a mortgage from a bank for the financing of the house.
- He/she makes a contract with the owner of the house to buy the house.

In addition, in RA ‘investment’ is limited to transactions that increase the stock of real assets in the economy. However, in reality many ‘investments’ are made to buy existing real assets (for example real estate, firms). Such transactions increase the real assets of an individual household or corporation, but they do not increase the real assets of the whole economy. With such a broader definition of investment, MA creates room for speculation and ‘animal spirits’ that is absent in RA.

Empirically, the disconnect of the demand for funds from banks or the capital market (‘financing’) and investments that increase the aggregate capital stock is obvious:

- New investments are often financed with *retained earnings*. In the 2012–2016 average, the S&P 500 firms financed 84 per cent of their investment with operating cash (IMF 2017). Therefore, the demand for external funds is much lower than the amount of new investment.
- Many investors demand funds for the purchase of existing assets. In 2012–2016, the S&P 500 firms spent on average 52 per cent of the investment expenditures for the acquisition of financial assets, M&A, and share buybacks and dividends. Only 48 per cent were used for capital spending, including research and development (IMF 2017).
- Banks are an important issuer of bonds. By issuing bonds they reduce the maturity transformation in their balance sheets.
- Governments are almost everywhere the most important issuer of bonds, while the funds issued are only partially related to new investments.

### 3.3 Saving in MA

In MA, household saving – that is, the abandonment of consumption – has completely different effects than in RA. It does not create new ‘funds’ which promote investment. Instead, it changes the distribution of funds (that is, sight deposits with banks) between the private households sector and the corporate sector, to the detriment of the corporate sector. It also reduces the profits of the corporate sector. Both effects have a negative impact on investment.

#### 3.3.1 Household saving and the distribution of liquidity

The starting point for a balance-sheet analysis of household saving is a situation where a household does not save, that is, it consumes its whole income. What happens if this household decides to save, that is, to reduce its consumption by €1000? The accounting logic implies that the expenditure of one agent is always the revenue of another agent. Thus, the lower consumption expenditures of the household sector imply lower revenues of the complementary sector, that is, the corporate sector.

Compared to the reference situation where the whole income is spent, the money stock of the household sector is €1000 higher. The deposits of the corporate sector are €1000 lower. The total money stock remains constant. Thus, household saving does not create additional funds, it redistributes the existing money stock. As a consequence, in MA, saving by itself cannot have an effect on the interest rate.

### 3.3.2 Household saving and profits of the corporate sector

Household saving does not only worsen the liquidity position of the corporate sector, it also has a negative effect on corporate profits. Compared to the reference situation with no household saving the net worth of the household sector is €1000 higher and the net worth of the corporate sector is €1000 lower. This mechanical relationship is used in the so-called *Kalecki equation* (Laski and Walther 2013).

$$P = I - [(T - G) + (Y_{HH} - C_{HH}) + (M - X)] \quad (6)$$

It shows a negative relationship between profits of the corporate sector ( $P$ ) and the sum of the changes in net financial assets of the other sectors in the economy:

- the *budget surplus*: the difference between taxes ( $T$ ) and government expenditures ( $G$ );
- the *saving of private households*: the difference between income ( $Y_{HH}$ ) and consumption ( $C_{HH}$ ); and
- the *current-account surplus* of the rest of the world: the difference between imports of the domestic economy and its exports.

Thus, the corporate sector realizes the highest profits if households consume all their income, that is, if they save nothing. All wages paid to workers flow back to the corporate sector so that it can finance all investments with retained earnings.

In sum, the saving of households does not release ‘funds’ for the financial market that could be used for investment. Instead, it redistributes the existing money stock from the corporate sector to the household sector and it has a negative effect on profits. Lower cash flows and lower profits reduce the propensity to invest. These ‘dominant causal mechanisms’ have a universal validity as they are based on simple accounting logic.<sup>3</sup>

The redistribution of liquidity from the business sector to the household sector can be compensated if the household decides to lend its additional deposits to the corporate sector. But even adding a financing decision to the saving decision can only compensate for the liquidity gap of the corporate sector but not the reduction of its profits.

Finally, the Kalecki equation shows that the only form of ‘saving’ that can be used to finance investment is the saving of the corporate sector, that is, its profits minus dividends. But this saving is not determined by the intertemporal consumption decision of households. It is ‘a mere residual’ (Keynes 1936 [1973], p. 64), which is negatively affected by household saving. In addition, this saving does not provide funds that are supplied on the financial market. It reduces the demand of investors on the financial market.

3. See also Lindner (2012, p. 3): ‘The advantage of accounting rules, once defined, is that they can be used to derive logically strictly true deductions’. He refers to Wolfgang Stützel (1978) who used balance-sheet mechanics for the analysis of macroeconomic processes. Rodrik (2015, p. 45) sees this differently: ‘Economics is a social science and society does not have fundamental laws ...’.

3.3.3 The confusion between ‘saving’ and ‘savings’

An obvious symptom for the confusion between the two paradigms is the usage of the key terms ‘saving’ and ‘savings’. Most authors use these terms as synonyms. An example is a post by Ben Bernanke (2015) in which he jumps continuously between ‘saving glut’ and ‘savings glut’.

In the terminology of the system of national accounts and the flow of funds analysis, only the term ‘saving’ is used. In this context, saving is a *flow concept* and it is identical to the increase of the net worth of an agent or a sector within a certain period.

The term ‘savings’ does not exist in such systems. It is also not used in banking statistics where only the term ‘savings deposits’ can be found. Thus, ‘savings’ is not a technical term and it should be avoided in professional papers. If ‘savings’ is used colloquially it is associated with ‘savings deposits’ or other bank deposits. In this context, ‘savings’ can be regarded as a *stock concept*.

In other words, using the terms ‘saving’ and ‘savings’ as synonyms means confusing stocks and flows. This confusion was already identified by Kalecki: ‘I have found out what economics is; it is the science of confusing stocks with flows’ (quoted in Robinson 1982, p. 295).

The incorrect usage of the term ‘savings’ is not only a semantic problem. It blurs the main deficiency of the Classical interest-rate theory that in reality ‘saving’ as a flow is not a supply of funds. Speaking of ‘savings’ creates the association that a stock of existing funds is provided.

3.4 The flow of funds in a monetary economy

The fundamental differences between the ‘dominant causal mechanisms’ of RA and MA become obvious if one compares the flow of funds in the two paradigms. In RA, funds flow from savers who create funds to investors (Figure 1). In MA, the source of new funds are banks that create money balances (Figure 3). The dominant

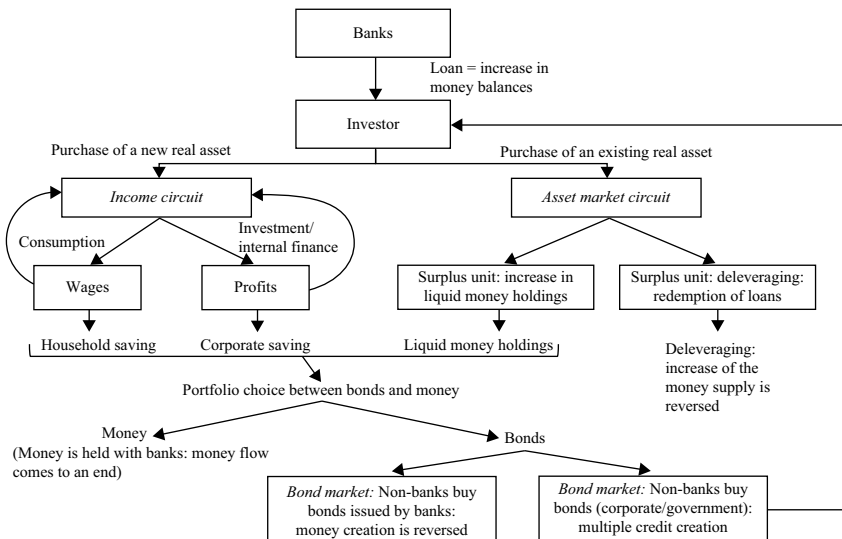


Figure 3 Flow of funds in MA

role of banks was already emphasized by Keynes (1937a, p. 668): ‘the banks hold the key position in the transition from a lower to a higher scale of activity’.

The funds supplied by banks to investors are used for the purchase of assets. This can be new real assets that are produced in an income-generating process. It can also be existing real or financial assets. Thus, funds flow into the *income circuit* where new assets are created, or the *asset circuit* where existing assets are purchased.

In both cases, the net financial assets of the investor decline (‘deficit unit’), while the net financial assets of his/her counterparty increase (‘surplus unit’). But in contrast to Gurley and Shaw (1955) and the logic of RA, the surplus unit does not finance the deficit unit. It is the financing by banks or lenders on the capital market which makes the realization of deficit plans possible. For example, if the owner of an apartment wants to sell it in order to achieve a financial surplus, they can only realize their plan if a bank is willing to provide a mortgage to a potential buyer of the apartment. Thus, even if financial transactions are related to real transactions, they are not identical to them.

If the investor uses the mortgage to buy a new real asset (income circuit), aggregate income increases according to the investment multiplier. Private households can consume and save more, and the profits of the corporate sector (corporate saving) increase. Thus, funds flow from banks via investors to savers and investment causes saving.

The surplus units have different options for using the funds:

- They can decide to hold the additional money balances on their bank account. In this case, the money flow stops.
- They can use the funds for deleveraging, that is, the down-payment of debt. In this case, the money stock is reduced, and the money creation is reversed.<sup>4</sup> This is also the case if the surplus units use their liquid financial assets to buy a bond issued by a bank.
- They can use the money balances to buy bonds or shares on the capital market. In this case, the money flow starts to circulate as it becomes available for additional investment. This is the revolving nature of finance which Keynes had in mind.

If the investor buys an existing real asset (*real asset circuit*) no additional income is created. Money flows to the surplus unit which has the same options of holding the money, buying assets on the capital market, and deleveraging or buying a bond issued by a bank.

The supply of funds by banks, the revolving nature of funds and the use of funds for the purchase not only of new but also of existing real assets are the main causes for *asset bubbles*. If banks are not sufficiently supervised and if central banks do not step in with higher policy rates, huge increases in loans and money are possible. For example, in Ireland and Spain, the total amount of loans increased by factors of five and four respectively, in the years 1999 to 2008. In RA, such dynamics are impossible, as the saving of private households is rather stable over time, and with the GPG as the only asset there is no room for speculative investments. Thus, when the Queen asked, on a visit to the London School of Economics in November 2008, ‘if these things were so large, how come everyone missed them?’, the answer should have been: ‘Because we use a model for a corn economy’.

4. This was the argument of James Tobin (1963, p. 8) against the unlimited ability of banks to create loans and money (‘widow's curse’): ‘there is an economic mechanism of extinction as well as creation, contraction as well as expansion’.

In sum, the maps of the flow of funds in RA and MA are completely different.

- In RA, new funds flow from savers to investors via banks and financial markets. The flow of funds is a one-way flow.
- In MA, new funds flow from banks to investors and then to savers. Financial markets redistribute existing money stocks. The flow of funds is circular.<sup>5</sup>

#### 4 A SIMPLE MODEL FOR MONETARY ANALYSIS: IS–LM

A simple theoretical framework that is based on the mechanics of MA is the standard IS–LM model. As the ‘workhorse of macroeconomic teaching’ (Gärtner et al. 2013) it is still a core model in leading textbooks (for example, Mankiw 2016; Blanchard 2017).<sup>6</sup> Post-Keynesian economists are critical of the IS–LM model. Dixon and Gerrard (2000, p. 8), for example, state: ‘We believe that the IS–LM model has become a largely irrelevant framework in mainstream macroeconomics’.

Minsky (1975) criticizes that it does not display the uncertainty which in his view is the core of Keynesian economics.<sup>7</sup> Davidson (2007, p. 185) is even more critical: ‘In Hicks’s IS–LM system, the real and monetary aspects of the economy are divided into independent subsets of equations. For these subsets to be independent requires the assumption of neutral money. Accordingly, this IS–LM model is merely another classical theory version of Samuelson’s Neoclassical Synthesis Keynesianism’.

We will show in the following that the IS–LM model provides not a perfect but a consistent model for MA. It helps to clarify the main mechanisms of the financial system in MA and the differences between it and the Classical model. It will become clear that the presentation of the real and the monetary aspects in ‘independent subsets of equations’ is not an expression of the neutrality of money. It expresses the independence of financial transactions from real transactions, but this implies a dominance of the monetary sphere over the real sphere.

Therefore, it is not correct to regard the IS–LM model as a ‘Classical theory version of Samuelson’s Neoclassical Synthesis Keynesianism’. We will show in the following sections why this is inadequate.

##### 4.1 Dominance of the financial sphere over the real sphere

In RA, the goods market and the financial market are identical. In the IS–LM model both markets are analytically separated: the goods market is represented by the IS curve, the financial market by the LM curve.

The IS curve shows that saving and investment alone cannot determine an equilibrium interest rate. Multiple equilibria are possible depending on the interest rate which is determined by the financial system (LM curve).

5. This reminds us of the discovery of the circular flow of blood. The Greek philosopher Galen of Pergamos (AD 129–217) believed that both the bright and the dark blood was distributed to the periphery only once and was consumed by the peripheral tissue (Azizi et al. 2008). In 1628, William Harvey found out that blood flow was the opposite to what was required by Galen’s theory and that it was not a one-way flow but a circular flow (Cooper 2016).

6. Krugman (2000), Blanchard (2009) and Tanner (2017) emphasize its simplicity as a positive feature.

7. Minsky (1975, p. 35): ‘The simple IS–LM framework violates the complexity of the investment-determining process as envisaged by Keynes’.

The LM curve reflects the independence of the financial sphere from the real sphere which is the key feature of MA. The equilibria on the LM curve are not influenced by real decisions, for example saving and investment. Therefore, the interest rate of the IS–LM model is not a real rate, but a nominal rate. As the only interest-bearing asset is a long-term bond, the interest rate is a long-term rate.

On the supply side of the LM financial system is a banking system that is not a pure intermediary. In line with MA, it can create loans and money autonomously, that is, independently of saving. According to the money multiplier, banks only need reserves that are provided by the central bank. The causality of the multiplier is questionable as it assumes that more reserves generate more money. In reality, the causality runs from higher deposits to higher reserves that are provided passively by the central bank. But it is also possible to derive an upward-sloping LM curve for a model of the money supply where the causality runs from deposits to reserves and where the central bank controls the money supply indirectly with its policy rate (Bofinger 2001, p. 87).

The demand for money is assumed to be proportional to the economic activity (transaction demand). There is also a demand for money as a store of value that depends on the level of the interest rate (speculative demand). This motive reflects the basic idea of MA that the capital market makes it possible for investors to invest their liquid assets in bonds. Changes in the *liquidity preference* – that is, the expectation of falling interest rates – lead to shifts from money holdings into bonds that lower the interest rate.

The decisive actor is the *central bank*. The standard presentation assumes that it holds the amount of the money stock constant which leads to a positive slope of the LM curve. A similar result can be obtained if one assumes that it targets the interest rate and follows a *Taylor rule*, that is, it raises its policy rate if output increases. One can also assume that it holds the interest rate constant which leads to a horizontal LM curve.

The dominance of the financial sphere over the real sphere becomes obvious in the case of an expansionary monetary policy. The central bank increases the monetary base, which, via the multiplier, also increases the money stock. The increased supply of money induces financial investors to buy bonds, so that the interest rate declines. The LM curve shifts downwards. With a lower interest rate, investment goes up, and according to the investment multiplier, aggregate income increases. With a given propensity to save, the amount of saving increases. In line with the logic of MA, the financial sector can create additional funds which lower the interest rate and increase investment. Additional investment causes additional saving. Thus, the separation of the monetary sphere (LM) from the real sphere (IS) is not an expression of the neutrality of money. Instead, the model is characterized by a dominance of the monetary sphere over the real sphere.

## 4.2 Financial sphere independent of saving

The role of saving in MA is also adequately presented in the IS–LM model. A higher propensity to save rotates the IS curve to the left. With an unchanged interest rate, this reduces aggregate income. Thus, equilibrium between the higher saving plans due to the higher propensity to save with unchanged investment plans is realized by a contraction of income. At the lower income, the higher propensity to save corresponds with the unchanged investment plans. Thus, the interest rate is not required for a goods market equilibrium. This becomes clear if one realizes that a higher propensity to save is identical to a lower propensity to consume. In the IS–LM model, firms react to lower consumption plans – that is, a lower aggregate demand – by reducing the aggregate supply of goods, which reduces income. A key insight from the IS–LM model is that excess saving by itself cannot have an effect on the interest rate.

If the central bank targets the interest rate, it can decide to lower its policy rate in order to avoid a negative effect on output due to higher saving. This also happens if, instead of a discretionary interest-rate policy, the central bank follows a Taylor rule. But in both cases, the interest-rate effect is due to monetary policy and not to saving.

In the standard IS–LM model the central bank targets the money stock. In this case, the decline in aggregate demand releases money balances that are no longer needed for transactions. If financial investors use these balances to buy bonds, the interest rate declines. But it is also possible that they expect higher interest rates and losses from bond holdings. In this case (the ‘liquidity trap’) they increase their speculative cash holdings and the interest rate remains constant. The LM curve becomes horizontal, with no stimulating effect on investment. Again, it is not saving that reduces the interest rate, it is the decision of financial investors to supply funds in the capital market.

Using the IS–LM model also has implications for the concept of a *neutral* or *natural interest rate*. In RA, this rate is determined by the time preference of consumers and the productivity of the GPG in the roundabout investment process. In the IS–LM model, five equilibria are possible:

- Multiple flow equilibria on the goods market (IS curve), which are equivalent to an equilibrium between saving and investment.
- Multiple flow equilibria on the financial market (LM curve), where the demand for money equals the supply of money (which is identical to an equilibrium of the demand for bonds with the supply of bonds).
- A simultaneous equilibrium on the financial market and the goods market, determined by the intersection of the IS and the LM curves.
- A full employment equilibrium, which is a simultaneous IS–LM equilibrium that is at the same time compatible with full employment (that is, a zero output gap).
- Adding the AS–AD schedule to the IS–LM model, in addition to the output gap the difference between a target price level ( $P^*$ ) and the actual price level ( $P$ ) must be considered. This leads to the concept of an ‘optimum interest rate’ with an optimum combination of the output gap ( $y$ ) and the price-level gap ( $P - P^*$ ). The optimum can be derived with a loss function ( $L$ ) of the central bank,

$$L = (P - P^*)^2 + \lambda y^2, \quad (7)$$

with  $\lambda$  describing the preferences for price level and output level stabilization.

Thus, in MA there is no room for a natural rate determined by real factors. This was already the view of Keynes (1936 [1973], p. 243):

I am no longer of the opinion that the concept of a ‘natural rate’ of interest ... has anything useful or significant to contribute to our analysis. ... If there is any such rate of interest, which is unique and significant, it must be the rate which we might term ‘neutral rate of interest’, namely the natural rate in the above sense which is consistent with full employment, given the other parameters of the system; though this rate might better be described, perhaps, as the ‘optimum rate’.

## 5 THE NEOCLASSICAL SYNTHESIS AND OTHER SYNTHESSES

With the focus of this paper on the financial system, the key differences between RA and MA can be identified (Table 1). They define the revolutionary core of Keynes’s thinking. In view of the completely different causal mechanisms, it is surprising that prominent economists consider a synthesis of both paradigms possible.

*Table 1 Main features and dominant causal mechanisms of RA and MA*

Real analysis	Monetary analysis
Funds in intertemporal exchange	
<ul style="list-style-type: none"> <li>• General purpose good (GPG)</li> </ul>	<ul style="list-style-type: none"> <li>• Money, that is, sight deposits held with banks</li> </ul>
Financing	
<ul style="list-style-type: none"> <li>• Provision of the GPG by saving of households (abandonment of consumption)</li> </ul>	<ul style="list-style-type: none"> <li>• Provision of money by banks or by other lenders (abandonment of liquidity)</li> </ul>
Saving and investment	
<ul style="list-style-type: none"> <li>• Saving of households generates investment</li> </ul>	<ul style="list-style-type: none"> <li>• Investment generates saving of households</li> </ul>
Banks	
<ul style="list-style-type: none"> <li>• Pure intermediaries of funds and unable to produce the GPG</li> <li>• Deposits create loans</li> </ul>	<ul style="list-style-type: none"> <li>• The only manufacturer of funds</li> <li>• Loans create deposits</li> </ul>
Financial markets	
<ul style="list-style-type: none"> <li>• Intermediation by financial markets not different from intermediation by banks</li> <li>• Financial markets channel funds from savers abandoning consumption to investors financing new investment</li> </ul>	<ul style="list-style-type: none"> <li>• Intermediation by financial markets different from intermediation by banks</li> <li>• Financial markets channel funds from lenders abandoning liquidity to borrowers who often do not finance new investment</li> </ul>
Central bank	
<ul style="list-style-type: none"> <li>• A powerless institution with no influence on interest rates, only on price level</li> </ul>	<ul style="list-style-type: none"> <li>• A powerful institution which determines the nominal interest rate</li> </ul>
Interest rate	
<ul style="list-style-type: none"> <li>• Real phenomenon</li> <li>• Real rate: units of the GPG tomorrow relative to one unit of the GPG today</li> </ul>	<ul style="list-style-type: none"> <li>• Monetary phenomenon</li> <li>• Nominal rate: units of money tomorrow relative to one unit of money today</li> </ul>
Flow of funds	
<ul style="list-style-type: none"> <li>• One-directional from savers to investors</li> </ul>	<ul style="list-style-type: none"> <li>• Circular from banks and investors to savers and back to investors</li> </ul>

## 5.1 Neoclassical Synthesis

As Blanchard (1991) notes, the term ‘Neoclassical Synthesis’ appears to have been coined by Paul Samuelson in the third edition of *Economics* (1955). The synthesis rests on the basic assumption that:

- the Keynesian Paradigm is suited for the *short term*, when prices and wages are rigid, so that it applies in situations with unemployment; and



- the Classical Paradigm is suited for the *long term*, when prices and wages are flexible, so that it applies in situations with full employment.

Thus, the Keynesian Paradigm is regarded as a special case, while the Classical is regarded as the general theory.

This view is difficult to reconcile with the fundamentally different causal mechanisms of the financial system in the two paradigms. It implies that, in the short term, the financial system functions along the lines of MA, while in the long term it functions along the lines of RA. In other words:

- In the short term, banks can generate loans and deposits autonomously. In the long term they must collect deposits from savers before they can provide loans.
- In the short term, household saving redistributes existing funds. In the long term it creates new funds.
- In the short term, ‘funds’ are sight deposits. In the long term they are the GPG.
- In the short term, the interest rate is a nominal rate. In the long term it is a real rate.
- In the short term, funds flow from banks and investors to savers and are circular. In the long term there is a one-way flow from savers to investors.

It is obvious that these basic mechanisms cannot be affected by the degree of price flexibility or the rate of unemployment. Thus, the Keynesian Paradigm cannot be regarded as a special case of the Classical analysis. It is a fundamentally different paradigm, with mechanics that operate in the short *and* the long term. For example, if saving cannot create funds in the short term, there is no reason why this should change in the long term. This excludes any synthesis with the Classical Paradigm.<sup>8</sup> This is what Keynes might have intended when he spoke of a ‘General Theory’.

## 5.2 The Wicksell confusion: equilibrium versus disequilibrium

An early synthesis that is still popular today was developed by Knut Wicksell. He tried to combine both worlds by relating them to different states of the economy, defined by the relation between the natural rate of interest and the money rate of interest.

Wicksell used the Classical interest-rate theory as model for equilibrium situations:

There is a certain rate of interest on loans which is neutral in respect to commodity prices and tends neither to raise or lower them. This is necessarily the same as the rate of interest which would be determined by supply and demand if no use were made of money and all lending were effected in the form of capital goods. It comes to much the same thing to describe it as the current value of the natural rate of interest on capital. (Wicksell 1936, p. 102)

Thus, the mechanisms of RA apply if the money rate of interest is identical to the natural rate of interest:

Now if money is loaned at this same rate of interest, it serves as nothing more than a cloak to cover a procedure which, from the purely formal point of view, could have been carried on equally well without it. The conditions of economic equilibrium are fulfilled in precisely the same manner. (Ibid., p. 104)

8. The idea of a Neoclassical Synthesis is not different from the attempt to build a synthesis between the heliocentric and the geocentric worldviews. In fact, Tycho Brahe (1564–1610) tried to combine both paradigms (the ‘Tychoic System’) (Wikipedia).

In *disequilibrium* – that is, when the money rate of interest is higher or lower than the neutral rate – the mechanisms of MA apply. Wicksell describes this process for a money rate below the natural rate as follows:

No matter what amount of money may be demanded from the banks, that is the amount which they are in a position to lend (so long as the security of the borrower is adequate). The banks have merely to enter a figure in the borrower's account to represent a credit granted or a deposit created. When a cheque is then drawn and subsequently presented to the banks, they credit the account of the owner of the cheque with a deposit of the appropriate amount. ... The 'supply of money' is thus furnished by the demand itself. ... [I]t follows that the banks, or rather the aggregate of banks taken as a whole, can ... lend any desired amount of money for any desired period of time at any desired rate of interest, no matter how low, without affecting their solvency, even though their deposits may be falling due all the time. It follows that ... the banks can raise the general level of prices to any desired height. (Ibid., p. 110)

Thus, Wicksell implicitly assumed that the mechanisms of the financial system change fundamentally depending on the level of the nominal interest rate. This is as implausible as the assumption of the Neoclassical Synthesis that these mechanisms vary depending on the level of the unemployment rate. With his synthesis, Wicksell created a huge confusion that has lasted to this day.

### 5.3 The loanable funds synthesis of incompatible flows

Another attempt of a synthesis is the so-called 'loanable funds theory'. While this term is often used for the Classical interest-rate theory (Lindner 2015), it can be defined more narrowly as a hybrid theory combining the features of RA and MA. In this version, which was developed by Robertson (1940) and Ohlin (1937a; 1937b), it assumes (Bibow 2001) that:

- the supply of loanable funds emanates from saving and an increase in the money stock ( $\Delta M$ ); and that
- funds are not only demanded for investment but also for net hoarding ( $H$ ).

Equilibrium on the financial market is then characterized by

$$S + \Delta M = I + H. \quad (8)$$

This synthesis is even more radical than the Neoclassical Synthesis or the synthesis by Wicksell, as it assumes that it is possible to combine both paradigms in one equation. But the 'funds' of RA and MA cannot be aggregated. In RA, 'funds' are the GPG, denominated in units of weight; in MA, 'funds' are bank deposits denominated in currency units. Just as water and electricity cannot flow in the same network, the different types of funds cannot be combined to a single flow of funds. In RA, the interest rate is a real rate; in MA it is a nominal rate. Finally, in the two paradigms the funds flow in opposite directions.

### 5.4 The Hicks confusion: deriving IS–LM from the Classical theory of interest

Prominent economists (Hicks 1937; Woodford 2010; Krugman 2011a; 2011b) even seem to believe that both paradigms are identical, as they try to derive the IS curve

of the IS–LM model from the IS schedule of the Classical theory. This procedure assumes that one can use the financial market represented by the IS schedule to derive the goods market represented by the IS curve.

Hicks (1937) starts with the cross of the Cassical interest-rate theory for a situation with an equilibrium interest rate. He then assumes an increase in income from  $Y_0$  to  $Y_1$ , which shifts the saving schedule downwards and the investment schedule upwards. Hicks assumes that the downward shift of the S curve is stronger than the upward shift of the I curve. This leads to a decline in the equilibrium interest rate from  $i_0$  to  $i_1$  with a higher level of saving and investment. Transferring the combinations  $Y_0, i_0$  and  $Y_1, i_1$  into an  $i/Y$  diagram yields an IS curve with a negative slope (Figure 4).

This approach implicitly assumes that income can increase by itself without a change in saving or investment. But in the IS–LM model an increase in income – that is, a movement along the IS curve from  $Y_0$  to  $Y_1$  – must be caused by a decline in the interest rate. This requires a downward shift in the LM curve (Figure 5). The lower interest causes an increase in investment and income, which results in higher saving.

If this is translated into an IS schedule, a different picture emerges. The saving schedule is vertical, as saving is independent of the interest rate in the IS–LM model. The slope of the I schedule is negative. The decline in the interest rate does not shift the I schedule. It causes a movement along the curve. The higher income shifts the S curve to the right. Thus, Hicks is wrong, as the IS curve cannot be derived from an autonomous shift in income which shifts the I schedule.

In addition, the assumed size and direction of the shifts of the I curve and the S curve are completely arbitrary. With a stronger upward shift of the I curve and a weaker downward shift of the S curve, the higher income would lead to a higher interest rate and an upward-sloping IS curve.

The approach of Hicks was explicitly endorsed by Paul Krugman (2011a; 2011b):

My favorite of these approaches is to think of IS–LM as a way to reconcile two seemingly incompatible views about what determines interest rates. One view says that the interest rate is determined by the supply of and demand for savings – the ‘loanable funds’ approach. The other says that the interest rate is determined by the tradeoff between bonds, which pay interest, and money. ... How can both views be true? Because we are at minimum talking about

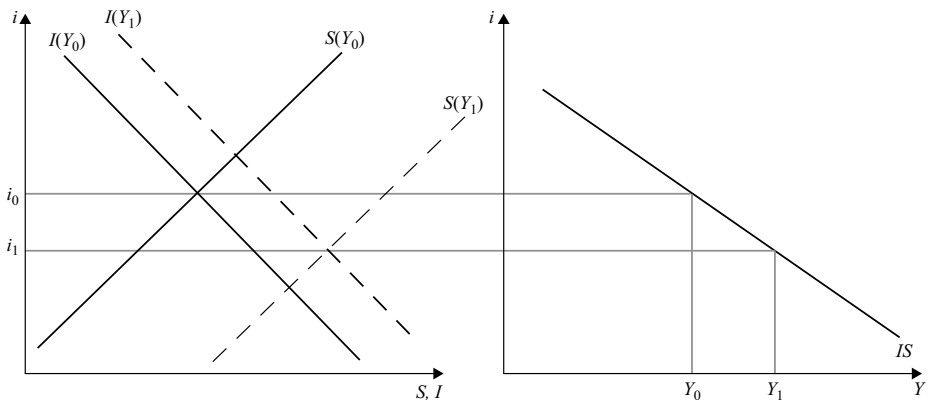


Figure 4 Hicks's attempt to derive the IS curve from the IS model

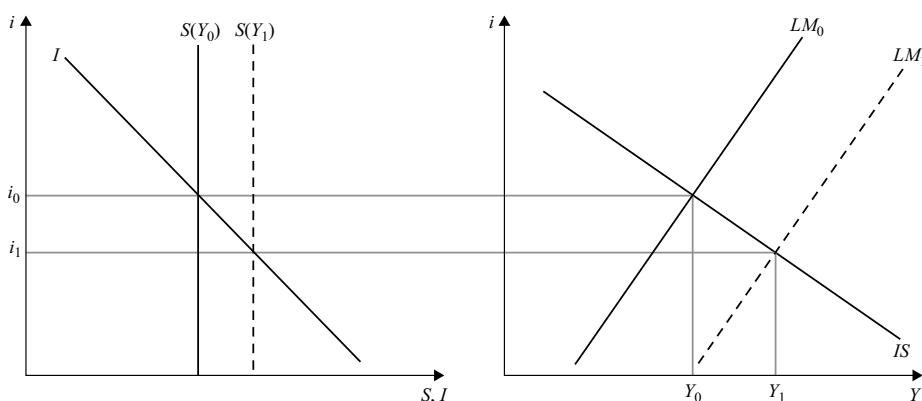


Figure 5 The correct relationship between the IS model and the IS–LM model

two variables, not one – GDP as well as the interest rate. And the adjustment of GDP is what makes both loanable funds and liquidity preference hold at the same time.<sup>9</sup>

In Krugman (2011b) he presents the same (flawed) derivation of the IS curve as Hicks.

Woodford (2010) makes a similar attempt. But in contrast to Hicks and Krugman, he assumes that the increase in income leads in the IS diagram to a downward shift of the saving schedule *and* the investment schedule. In order to derive a downward-sloping IS curve he must assume that the downward shift of the S curve is stronger than the downward shift of the I curve.

The procedure is confronted with the same criticism as the approach of Hicks and Krugman. It reflects above all the arbitrariness of such derivations as not only the size of the shifts but also their direction is not based on a sound theoretical analysis. The fact that prominent economists are not aware of the fundamental differences between MA and RA shows the importance of elaborating the causal mechanisms of the financial system in these paradigms.

## 6 REVIVING KEYNESIANISM BY BREAKING UP FLAWED SYNTHESSES

If true Keynesianism is to be awakened again, the decisive key differences compared to the Classical thinking must be identified. This paper argues that they are mainly related to the dominant causal mechanism of the financial system. While many of the ideas presented in this paper are not new, a comprehensive and systematic comparison is required to show the fundamental gulf that divides the Keynesian from the Classical paradigm.

This comparison also makes it clear that the Classical paradigm has no relation whatsoever to reality. With its general-purpose good and no room for independent financial transactions it is difficult to imagine a greater contrast to reality. A model with mechanisms opposite to those of reality is not science. It is science fiction.

9. Krugman (2011b) wrote: ‘the distinction between the loanable funds and the liquidity preference theories of the rate of interest – or rather, the ability how both can be true at once, and the implications of that insight – seem to have been utterly forgotten by a large fraction of economists and those commenting on economics’.

The inability of economists to forecast the global financial crisis is the clearest expression of this alienation. But despite this failure, nothing fundamental has changed. Most economists still believe that saving is a source of finance. In DSGE models, banks still do not play a decisive role. A recent survey (Claessens and Kose 2018, p. 127) describe the state of the art as follows: ‘even when banks are included, their treatment is highly stylized. For example, many models simply assume the presence of banks, but do attempt to justify their existence ...’.

A reawakening of Keynesianism is difficult because a deconstruction of Classical thought devalues the human capital of countless macroeconomists. In addition, despite the many efforts of Post-Keynesians, Keynesianism often lacks the seemingly scientific elegance of the dominant macroeconomic models.

But the revival of Keynesianism could end the confusion of macroeconomic thought that is caused by the blending of incompatible paradigms. And even if its models seem less sophisticated than the mainstream ivory-tower models, they have the unbeatable advantage of depicting reality and not a fantasy world.

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