An Open Letter to the Dean and all Economics Professors of the School of Business and Economics at Maastricht University (UM)

RE: Evidence suggests that UM's teaching on how banks work is flawed – and why this matters a lot!

Dear Prof. Møllgaard,
Dear Economics Professors,

We are a student-driven initiative at Maastricht University that is eager to improve the economics curriculum. With this open letter, we want to raise your awareness that what is currently taught in economics at UM on how banks work and how money is created is contrary to existing evidence and does not fit with the high-quality education that UM offers. Professors and textbooks at UM teach the mainstream but faulty view of "loanable funds" and "money multiplier", even though central banks and commercial banks openly admit that those concepts are misleading.
We'd like to present convincing peer-reviewed evidence to demonstrate that both the approaches of "loanable funds" and "money multiplier" are incorrect and unproven, and that teaching these concepts has implications for UM's education in economics.

What is currently taught

The "loanable funds" approach, which is currently the most dominant one in economics teaching at UM, states that banks are merely intermediaries like other non-bank financial institutions, collecting savings in the form of deposits that are then lent out to willing borrowers. It implies two crucial things. First, it implies that money is a scarce resource and, second, that savings are necessary to grant loans, from which follows that savings finance investment.
According to the "money multiplier" approach, individual banks are mere financial intermediaries that cannot create money individually, but collectively end up multiplying reserves through systemic re-lending and thereby create money. However, the amount of money that could be created is limited by the amount of reserves, which is supply-determined by the central bank.

How banks actually work

Banks individually create money (liquidity) out of nothing by granting a loan. By granting a loan the individual bank extends its balance sheet by creating simultaneously a loan (asset) and a deposit (liability). If a loan contract is fulfilled and paid back, money is destroyed and drained from the monetary circuit. The money creation is neither constrained by savings nor by reserves, but rather by demand for loans as well as by profitability and solvency considerations. What is scarce, is not money nor deposits, but good borrowers.

Central banks contrast textbooks views

All relevant central banks contrasted both views in recent publications, from which we want to present but a few. Their take differs from that of the textbooks used by UM of which representative quotes are presented at the end of this letter. McLeay et al. of the Monetary Analysis Directorate of the *Bank of England* (2014, p.14) clearly denied the "loanable funds" and "money multiplier" by stating:

> "Money creation in practice differs from some popular misconceptions — banks do not act simply as intermediaries, lending out deposits that savers place with them, and nor do they 'multiply up' central bank money to create new loans and deposits" […] Whenever a bank makes a loan, it simultaneously creates a matching deposit in the borrower's bank account, thereby creating new money.".

Likewise has the *Deutsche Bundesbank* (2017, p.13) put it in one of their monthly reports:

> "[…] a bank's ability to grant loans and create money has nothing to do with whether it already has excess reserves or deposits at its disposal. Instead, various economic and regulatory factors constrain the process of money creation. From the perspective of banks, the creation of money is limited by the need for individual banks to lend profitably and also by micro and macroprudential regulations. Non-banks' demand for credit and portfolio behavior likewise act to curtail the creation of money.".

Economists and textbooks conclude from the "loanable funds" theory that savings finance investment. A working paper by Kumhof and Jacab (2015, p.II) published by the Bank of England contradicts this view:

> "[…] if the loan is for physical investment purposes, this new lending and money is what triggers investment and therefore, by the national accounts identity of saving and investment (for closed economies), saving. Saving is therefore a consequence, not a cause, of such lending. Saving does not finance investment, financing does. To argue otherwise confuses the respective macroeconomic roles of resources (saving) and debt-based money (financing).".

Those statements from central banks actually debunk the textbooks in use at UM as invalid on those points and on all conclusions based on it. However, we'd also like to present empirical evidence from an experiment at a commercial bank.

Empirical Evidence from a commercial bank

Richard Werner (2014) conducted an empirical test, whereby money was borrowed from a cooperating bank, while its internal records were being monitored. Similar to the statements above, the result was, that:

> "[i]n the process of making loaned money available in the borrower's bank account, it was found that the bank did not transfer the money away from other internal or external accounts, resulting in a rejection of both the fractional reserve theory ["money multiplier"] and the financial intermediation theory ["loanable funds"]. Instead, it was found that the bank newly 'invented' the funds by crediting the borrower's account with a deposit, although no such deposit had taken place. This is in line with the claims of the credit creation theory.". (Werner, 2014, p.16)

The director of the cooperating bank, Mr. Rebl, also confirmed the results.

Appendix 2. Letter of confirmation of facts by Raiffeisenbank Wildenberg e.G. (Translation; original in online Appendix 3).

10 June 2014

Dear Prof. Dr. Werner,

Confirmation of Facts

In connection with the extension of credit to you in August 2014 I am pleased to confirm that neither I as director of Raiffeisenbank Wildenberg eG, nor our staff checked either before or during the granting of the loan to you, whether we keep sufficient funds with our central bank, DZ Bank AG, or the Bundesbank. We also did not engage in any such related transaction, nor did we undertake any transfers or account bookings in order to finance the credit balance in your account. Therefore we did not engage in any checks or transactions in order to provide liquidity.

Yours sincerely,

M. Rebl,
Director, Raiffeisenbank Wildenberg e.G.

(Werner, 2014, p.18)

The empirical results are at least representative for the commercial banking system in the EU since all banks conform to identical European bank regulations. However, there is little reason to assume that the fundamental logic does not apply to banks in other economic areas.

Implications for UM's education in Economics

The consequences of teaching "loanable funds" and "money multiplier" are far-reaching for both economic theory as well as recommended and implemented policies.

First, economic theory based on "loanable funds" and "money multiplier" is not supported by empirical evidence. This applies especially and to a large extent to neoclassical economics, which is currently the most dominant theory in UM's education in economics. Thus, we earnestly suggest that you - as dean and economics professors - consider conducting an independent investigation on the veracity of the "loanable funds" and "money multiplier" theories as well as of any supporting empirical evidence in an open arena where students and teachers are encouraged to engage in conversation about the progress and outcomes of your inquiry. If this inquiry leads you to come to the same conclusions as we have, we trust that you will adjust the curriculum. We see this to be in line with UM's dedication to academic skepticism that has led it to deserve its celebrated reputation and international respect by following the principles of scientific inquiry.

Second, the teaching of "loanable funds" and its faulty implication that savings finance investment is likely to bring UM students to wrong conclusions in their future responsibility. As UM students at some point in their career are likely to have the responsibility to give policy recommendations or to reach an important economic decision, they are, unfortunately, bad advised to rely on what they have learned in their study in economics at UM so far.

Thus, we kindly want to ask you for considering to take the lead in making sure the curriculum of all related courses in economics stays fact based and reflects the most up to date evidence on the processes that are at play in the modern economy. Below, we present evidence that the textbooks currently used don't reflect the facts on how banks work, and therefore we argue that these books shouldn't be used until the errata have been pointed out and corrected. https://pinemaastricht.wordpress.com/

We would be very enthusiastic about discussing this letter and possible opportunities for progressive change with you.

Thanks a lot for considering this letter.

Yours Sincerely,

PINE UCM

References:

Bundesbank, D. (2017). The role of banks, non-banks and the central bank in the money creation process. *Deutsche Bundesbank Monthly Report*, 13-33.

Kumhof, M., & Jacab, Z. (2015). *Banks are not intermediaries of loanable funds—and why this matters*.

McLeay, M., Amar, R., & Thomas, R. (2014). Money creation in the modern economy, Bank of England's Monetary analysis directorate. *Quarterly Bulletin Q1*.

Werner, R. A. (2014). Can banks individually create money out of nothing?—The theories and the empirical evidence. *International Review of Financial Analysis, 36*, 1-19.

<u>Representative Quotes from Books currently in use at UM:</u>

Mishkin (2016) - The Economics of Money, Banking, and Financial Markets

> "A financial intermediary does this by borrowing funds from lender-savers and then using these funds to make loans to borrower-spenders. The ultimate result is that funds have been transferred from […] the lender-savers […] to the borrower-spender with the help of the financial intermediary (the bank). […] The process of indirect financing using financial intermediaries, called financial intermediation, is the primary route for moving funds from lenders to borrowers." (p. 80)

Szirmai (2015) - Socio-Economic Development

> "One of the typical problems of developed economies is the match between the willingness to save and the willingness to invest. Financial intermediaries play an important role here. Savings are often deposited with financial institutions such as banks [...]. Through long and complex chains of financial institutions and financial markets, these savings are finally channeled to investors." (p. 291)

Acemoglu et. al (2016) – Economics

> "Banks and other financial institutions are the economic agents connecting supply and demand in the credit market. Think of it this way: when you deposit your money in a bank account, you do not know who will ultimately use it. The bank pools all of its deposits and uses this pool of money to make many different kinds of loans [...]. Banks are the organizations that provide the bridge from lenders to borrowers, and because of this role, they are called financial intermediaries. Broadly speaking, financial intermediaries channel funds from suppliers of financial capital, like savers, to users of financial capital, like borrowers." (ch. 24.2)

Blanchard et al. (2017) – Macroeconomics, a European perspective

> "Modern economies are characterised by the existence of many types of financial intermediaries – institutions that receive fund from people and firms and use these funds to buy financial assets or to make loans to other people and firms. The assets of these institutions are the financial assets they own and the loans they have made. Their liabilities are what they owe to the people and firms from whom they have received funds. Banks are one type of financial intermediary." (p. 75)

Gottfries (2013) – Macroeconomics

> "So far we have discussed the credit market as if households were lending directly to firms. In practice, however, households seldom do this. Instead, most of the lending goes through banks, which borrow from the households in the form of deposits and lend in the form of bank loans […]. Banks receive deposits from households and firms and lend the money in various forms." (p.501)

Varian (2014) - Intermediate Microeconomics

> "The amount of borrowing or lending in an economy is influenced to a large degree by the interest rate charged. The interest rate serves as a price in the market for loans. We can let D(r) be the demand for loans by borrowers and S(r) be the supply of loans by lenders. The equilibrium interest rate, $r*$, is then determined by the condition that demand equal supply: $D(r*) = S(r*)$." (p. 306)

Montiel (2011) - Macroeconomics in Emerging Markets

> "[...] financial institutions that act as intermediaries between borrowers and lenders. [...] The central point is that in this environment, financial intermediation – the transformation of saving into investment and allocation of risk – is not automatic or costless. [...] Their [Bank's] main activity is on the asset side of their balance sheet [...]. How can they do all this? Their key advantage over individuals arises from the benefits of pooling. Pooling gives banks advantages over individuals both as lenders and as borrowers." (p. 476)

Feenstra & Taylor (2014) - International Macroeconomics

> "[...] a country´s central bank controls the money supply. Strictly speaking, by issuing notes [...] and private bank reserves, the central bank controls directly only the level of M0. However, [...] central bank's policy tools are sufficient to allow it to control the level of M1 indirectly, but accurately. (p. 77)