

# Initial and final finance in the monetary circuit and the theory of Effective Demand

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## Motivations (1)

- 1) Supermultiplier as the most promising heterodox (Classical-Keynesian) growth model:

$$Y = \frac{1}{1 - c(1 - t) - v_n g^z + m} (\overline{C}_a + \overline{G} + \overline{E}) = \frac{1}{1 - c(1 - t) - v_n g^z + m} Z$$

- The SM is an extension of the Keynesian multiplier with an accelerator function

$$I = v_n g^e Y_D$$

- This in view of the shortcomings of the neo-Kaleckian models:
- growth without a tendency to normal capacity utilisation
- growth led by animal spirits (not the best Keynes' legacy) or by endless catching up of normal capacity utilisation (and normal profit rate)
- growth cannot be wage-led since wages are an induced component, they cannot lead growth (with the exception of the transition to a new normal path, but this we know because we adopt the SM approach)
- growth cannot be profit-led, e.g. a higher normal profit rate does not stimulate investment if not as a signal of higher expected effective demand
- - no clear inclusion of autonomous components of demand (with even recourse to loanable fund financing of these components). (see Pariboni)

## Motivations (2)

- 2) Necessity to relate the SM approach to endogenous money theory:
- Autonomous components of demand must be financed by newly created purchasing power (by definition they do not depend on “earned income”). Autonomous consumption is financed by consumers’ credit (not by loanable funds as in some NK models)
- Exports are financed by endogenous money creation too (either by local banks that finance imports or by foreign banks) and not by «saving from the North»
- The State spends before taxing and collecting saving (as shown by MMT, that now seems to agree with Marc Lavoies’s Post-Chartalist view) → a paper of mine is forthcoming in the JPKE)
- Investment is induced by expected demand, so it must also be financed by newly created purchasing power.
- Problem: endogenous money finances final demand or production? “Received view”: it finances final demand
- However, most production is undertaken in the expectation of demand or on the basis of purchase orders (e.g. big plants), moreover:
- final demand often financed by non-banks (e.g. financial intermediaries)

# Endogenous money

- I believe that it is useless to explain here what I mean by endogenous money
- Credit → deposits → reserves
- At the policy interest rate, the CB provides all the reserves commercial banks demand
- As a digression, endogenous money is not a criticism to marginalism, but rather a fact.
- Wicksell is a well-known example.

## Initial finance (Keynes' finance)

- “Initial finance” is the endogenous money-creation implemented to *finance production* during the gestation period between the time when expectations or orders take shape and that of delivery of the good and final payments.
- Initial finance is also the realm of the monetary circuit. In the paper I focus on Graziani (the referees insisted I did not know enough of the MC literature: on the one hand, the little I read suggests wide homogeneity; on the other, some authors are, at least for me (and not only for me!), almost unintelligible)
- The MC has many troubles, the best known concerns the origin of profits: since banks finance only wage costs, AD consists of out-of-wages consumption demand only: so where are profits?
- (the question of how firms pay interests on loans, discussed by Zezza, derives from this main problem, and I do not believe it can be solved by [ex-post] accounting methods).
- Other problem: the peculiar idea that if workers save, firms make losses, so they issue debt to collect workers saving and thus return loans to firms. This can work in the short period, when firms invest in inventories (unsold commodities), but not in the long run, as pretended by circuitists (firms would reduce production).
- Finally, circuitists pay a lip-service to the role of AD, but there is no clear relation between the MC and the theory of ED. Moreover, according to Graziani, firms autonomously decide production levels: this is wrong, firms take this decision on the basis of expected ED.

Main purpose: integrate initial finance and the theory of ED. Main inspiration Davidson (1986)

- Davidson distinguishes between “the necessary (short-term) *financing* of an investment project while it is being constructed and the (long-term) *funding* of an investment project after it is completed”.
- 1) Once investment has been decided, a “**firm** will typically engage an underwriter (**investment banker**), who will contractually commit his institution to provide for the floatation of a new issue, at a specific long-term interest rate. (...) The sales receipts of the new issue are expected to generate an ‘investment fund’ for the *buyer* [of the capital good] to make payment to the seller [of the capital good] at the delivery date. ...Armed with the underwriter’s guarantee to provide liquidity via an ‘investment fund’ (...), the investing entrepreneur can safely enter into a forward purchase order thereby providing the **capital goods producer** with a sales contract”. We suppose that the investing firm (the buyer of the capital good) wishes to finance, through the investment banker, the full price  $P_k$  of the investment good.
- 2) “Normally, the **capital good producer** has an established customer relationship with his **commercial banker**. Consequently, the signed purchase order contract is usually more than sufficient collateral for the commercial banker to be willing to commit the bank to finance the producer’s production costs via short-term (working capital) loan for the duration of the production period” (ibid, pp. 103-4). We may presume that the bank will finance the production costs  $P_c$  of the capital good net of normal profits projected by the capital good supplier. So we expect that  $P_c < P_k$ .

## How final finance (funding) emerges from initial finance

- 3) “The mere fact that previously idle resources are now producing *real* investment goods ...means that, out of the increased income flow, a greater *real* saving flow must be *pari passu* occurring.” Saving is of course emerging out of the operation of the Keynesian income multiplier.
- 4) Savings are eventually used to finance the final purchase of capital goods: “This real savings is widely dispersed among households and other agents who have earned income this period but have not exercised all the claims on the products of industry that their income provided for them. In a monetary economy, these unexercised claims initially take the form of the possession of fully liquid money. When real investment has been produced and the associated real spending flows have already been completed, the investment underwriter can float the new issue, whose nominal value equals the purchase price of the new investment. If the underwriter is successful in floating the issue at the interest rate quoted in the underwriting agreement as the cost of funding, the underwriter makes a profit. At the long-run rate of interest, members of the public will have given up their current (liquid) claims on resources equal to the extra liquidity created by the banking system and used by the capital goods producer to meet his production cost commitments”.

## Qualifications

- Banks are concerned with *financing* (or *initial finance*) while non-bank intermediaries are concerned with *funding* (or *final finance*).
- *Initial* finance only covers the production costs of the investment good net of profits and not its full price - that is  $P_c < P_k$ . As a result, savings generated by the multiplier process after the production of the capital good, and channeled as long-term *final* finance to the investing firm through the non-bank financial intermediaries, fall short of the necessary *final* funds to be collected. **The MCT ghost related to the fact that profits are not included in initial finance re-emerges again**, although in another context
- Let us see an example inspired by Dalziel (1996)

Suppose that the price of the investment good is  $P_k = 100$  ua and its production cost (net of normal profits) is  $P_c = 80$  ua. With a marginal propensity to consume  $c = 0.8$ , 80 ua of savings are generated, short of the final finance necessary to finance investment (100 ua).  $\Delta F$  long term fin. Invest.  $\Delta H$  deposits.  
 $P_c = \Delta S = \Delta F + \Delta H < P_k$

*Table 1 - Keynesian multiplier and finance*  
(marginal propensity to consume = 0,8)

periods	$\Delta I$	$\Delta Y$	$\Delta C$	$\Delta S$	$\Delta F$	$\Delta H$
1	80	80				
2		64	64	16	14.4	1.6
3		51.2	51.2	12.8	11.5	1.3
4		41.0	41.0	10.2	9.2	1.0
5		32.8	32.8	8.2	7.4	0.8
...		...	...			
$\infty$		400	320	80	72	8

## Possible solution: a two stage multiplier

- There is no other solution but to assume that “non-banks” somehow finance all *final payments* for investment goods ( $P_k = 100$ ), partly by intermediating savings generated by the Davidsonian process (equal to  $P_c = 80$ ) and partly by resorting to an endogenous credit-money creation (by  $P_k - P_c = 20$ ).
- This might for instance take the form of a short-term loan by the monetary to the financial department of the same bank, or by banks in favour of non-bank financial intermediaries so that the investing firm can purchase the capital good.
- Should the investment banker have difficulties to finance successful “new issue flotations”, Davidson maintains, s/he “might adjust to this problem ... by further borrowing from the banking system.” pre-emptive access to the institutions that create money, are the ultimate basis for liquidity in the financial markets.” This of course reminds us of Keynes’s famous dictum that the “investment market can become congested through a shortage of cash. It can never become congested through shortage of saving. This is the most fundamental of my conclusions within this field” (1937).
- Once the producer has received the payment ( $P_k = 80 + 20$ ) she can return the initial finance ( $P_c = 80$ ) to the bank. Notably, in this way she has also realised her profits (equal to  $P_k - P_c = 20$ ), thus **solving the MCT puzzle**.
- Suppose these profits are spent. As a result, a multiplier process similar to that of Table 1 develops. This is a **phase-2 multiplier process**. Eventually income increases by a further 100 ua out of which 20 ua of savings are generated ultimately collected by the investment banker that can thus return the short-term loan. In this final step, therefore, all final investment demand is funded.

## Summing up

- Value of the investment good  $P_k = 100$ . Initial production finance  $P_c = 80 \rightarrow$  Final funding  $\Delta S = 80$ , collected by the investment banker.
- Extra short-term loan needed to finance investment = 20, collected by the investment banker. Then  $20 + 80 = P_k$ , the investor can pay the capital good inclusive of the producer' profit.
- Profits are spent (per simplicity same MPC)  $\rightarrow \Delta S' = 20$ , collected by the investment banker that can thus redeem the short-term loan.
- $I = P_k = 80 + 20 = S$ , all investment is ex post funded.

## Graziani's rights and wrongs

- Graziani was ultimately right when he argued that “investment finds its final finance in saving”, while initial or temporary finance has to do with inception of production. He was also (almost) correct in saying that “investment finance is supplied by final finance and not by bank advances” and that “the role of final finance is ...to make it possible for firms to repay their bank debt”.
- What is missing in the gap between *initial* (short-term credit-based) and *final* (long-term saving-based) finance is precisely the income multiplier process, without which we obtain confused results - including the role of final finance, at times used to fix firms' losses and at other times to finance investment.
- The *General Theory*, not the *Treatise* (as argued by Graziani), is the realm of a satisfactory “monetary-production multiplier circuit”.

## Discussion

- Initially, I suspected the “double multiplier process” of being somewhat *ad hoc*.
- On reflection, I realised that it was not surprising at all because it reflects an apparent puzzle in the theory of effective demand. On one hand this theory holds that *autonomous* demand, financed by endogenous credit/money, must precede production (I called this “received view” in the paper); on the other hand, production, also financed by endogenous credit/money (*initial* finance), often precedes actual demand as it is undertaken on the basis of *expected* demand or of orders.
- We may put it this way: since demand precedes production, initial finance should finance final demand (“received view”). Ex post, after the multiplier has fully operated, final demand is funded by saving. In practice, however, most production is carried out on the basis of *expected* demand or of orders. So, initial finance support production with a “supplement” that finances final demand (production financing anticipates, so to speak, final demand financing). Ex post, again, final demand is funded by saving.
- (The “supplement” is necessary as initial finance only covers part of the whole price of, say, an investment good).

## Final question: do retained profits finance investment?

- A final question concerns retained profits or *internal final* finance as a possible alternative to *external final* finance as a way to finance investment.
- Note first that it is investment decisions leading to capital-goods production decisions financed by initial finance that in the short run, through fuller utilisation of capacity and, in the long run, through creation of new capacity, determine savings – including retained profits – and not the other way round. Thus *internal finance must logically be a form in which final finance presents itself*.
- Saving generated by the multiplier process may indeed also consist of retained profits for the investing firm, used to finance investment to lessen the need for external final **funding** to settle the final payment of capital goods.
- In line with Keynesian logic, although investment is **funded** by profit/retained-savings (in addition to external savings), it was an initial order of capital goods financed by initial finance that generated, via the Keynesian multiplier, those profits/savings.

## A simple example

- Suppose that the producer of the investment good, after having received the order, spends  $P_c = 80$  out of initial finance, as in the example.
- Assume, however, that the investing firm asks the investment banker to collect 60 of final financing, expecting to fund the rest out of expected profits.
- The first round multiplier generates  $\Delta S = 80$  saving. For the sake of the argument assume that 40 are out of the profits of the investing firm (who participate qua producer to the multiplier effect consequent of its own investment). The investing firm can thus fund 40% of the investment cost.
- The second round multiplier (the short-term loan) generates an extra  $\Delta S = 20$  saving, half of which accrue to the investing firm.
- It may thus either self-subscribe part of its funding bonds issued by the investment bank, or it may reduce to 50 the required external funding.
- In this simple example: **final funding** =  $\Delta S = 100 = \text{external funding (50)} + \text{internal funding (50)}$ .

## Conclusions

- Similar lines of reasoning can be applied to the various components of autonomous demand: endogenous money (initial finance) *finances* production decisions, autonomous spending is eventually *funded* by saving created by initial spending (and by second round multiplier)
- In the paper I also make the case in which also induced-consumption production is financed by initial finance.
- This paper suggests a way to integrate the Keynesian theories of multiplier and supermultiplier with the endogenous-money view, Keynes's finance theory and MCT
- It is a step towards reconciling Graziani's supply-side preoccupation with *initial* production financing, and the concern of demand-side-oriented heterodox theories with *final* financing of autonomous demand.
- The paper, however, finds Graziani's MCT unsatisfactory precisely because it neglects (or even rejects) income (super)multiplier analysis that is precisely the nexus between initial and final finance.
- By employing the income multiplier, that Graziani's MCT overlooks, we rigorously prove Graziani's insight that initial finance pertains to production while investment demand is funded by savings, even solving the **MCT profits puzzle** (and also the internal funding puzzle).

# Conclusions

- Though mainly concerned with the standard case of the Keynesian multiplier, the paper takes some steps towards extending analysis to other autonomous components of private spending in view of the supermultiplier approach
- Lavoie: The ability of banks to create credit independently of previous saving is a feature of a monetary production economy which makes it distinct from the exchange economy which is described in most neoclassical models, where credit can only be granted if some other agent in the economy accepts to be thriftier. It is true that, at the end of the period, from an *ex post accounting point of view, the liability of the borrower has to have a counterpart*, which is an asset held by someone else. Post-Keynesians such as Augusto Graziani and Paul Davidson have always made the distinction between initial finance (credit availability) and final finance (funding or saving). As Keynes famously put it, calling it the coping stone of his liquidity theory of money, ‘the public can save *ex ante and ex post and ex anything else until they are blue in the face, without alleviating* the problem in the least’. What he meant is that a rise in economic activity will require an expansion of the loans granted by the banking system, not an increase in saving. This point has recently been emphasized by officers at the Bank for International Settlements (Borio), when criticizing the ‘world saving glut’ explanation of the boom that had preceded the crisis: ‘Because saving and investment are the mirror image of each other, it is misleading to say that saving is needed to *finance investment. In ex post terms, being simply the outcome of various forms of expenditure, saving does not represent the constraint on how much agents are able to spend ex ante. The true constraint on expenditure is not saving, but financing’, meaning here the initial finance, the bank loans* that post-Keynesians are talking about.
- Did he read my paper?