It is not *la vie en rose*. New insights from Graziani's theory of monetary circuit

Marco Veronese Passarella

"Link Campus" University of Rome & University of Leeds

STOREP Conference 2022

27 May 2022

Research questions

1) How can we modify a standard SFCM to embed Graziani's TMC?

Research questions

1) How can we modify a standard SFCM to embed Graziani's TMC?

2) Is the market-clearing price mechanism neoclassical? (misconception 1)

Research questions

1) How can we modify a standard SFCM to embed Graziani's TMC?
2) Is the market-clearing price mechanism neoclassical? (misconception 1)
3) Is investment funding at odds with production financing? (misconception 2)

Research questions

1) How can we modify a standard SFCM to embed Graziani's TMC?
2) Is the market-clearing price mechanism neoclassical? (misconception 1)
3) Is investment funding at odds with production financing? (misconception 2)
4) Does the TMC neglect *financialization*? (misconception 3)

Research questions

1) How can we modify a standard SFCM to embed Graziani's TMC?

2) Is the market-clearing price mechanism neoclassical? (misconception 1)

3) Is investment funding at odds with production financing? (misconception 2)

4) Does the TMC neglect *financialization*? (misconception 3)

5) Is the TMC just a (post) Keynesian theory? (misconception 5)

SFCMs vs TMC

- Main differences between SFCMS and the TMC:

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
    1) single-period vs. multi-period analysis

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
  1) single-period vs. multi-period analysis
  2) (gross) ex-ante vs. (net) ex-post accounting

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
  1) single-period vs. multi-period analysis
  2) (gross) ex-ante vs. (net) ex-post accounting
  3) key flows vs. stock-flow completeness

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
  1) single-period vs. multi-period analysis
  2) (gross) ex-ante vs. (net) ex-post accounting
  3) key flows vs. stock-flow completeness
- Reasons:

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
    1) single-period vs. multi-period analysis
    2) (gross) ex-ante vs. (net) ex-post accounting
    3) key flows vs. stock-flow completeness
- Reasons:
    1) different levels of abstraction

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
    1) single-period vs. multi-period analysis
    2) (gross) ex-ante vs. (net) ex-post accounting
    3) key flows vs. stock-flow completeness
- Reasons:
    1) different levels of abstraction
    2) different research questions

SFCMs vs TMC

- Main differences between SFCMS and the TMC:
  1) single-period vs. multi-period analysis
  2) (gross) ex-ante vs. (net) ex-post accounting
  3) key flows vs. stock-flow completeness
- Reasons:
  1) different levels of abstraction
  2) different research questions
- SFCMs = dynamic counterpart of TMC (Graziani 2003; Godley 2004; Lavoie 2004, 2021; Godley/Lavoie 2007; Zezza 2012; Veronese Passarella 2014, 2017; Sawyer/Veronese Passarella 2017)

A TMC-SFC MODEL

1) Model assumptions:

A TMC-SFC model

1) Model assumptions:

    - Two classes: lower class (workers) and upper class (capitalists)

A TMC-SFC MODEL

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government

A TMC-SFC model

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities

A TMC-SFC MODEL

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y

A TMC-SFC MODEL

1) Model assumptions:

- Two classes: lower class (workers) and upper class (capitalists)
- Closed economy, no government
- Two financial assets: bank deposits and corporate securities
- Firms can set either p or y
- Banks provide loans and deposits on demand

A TMC-SFC model

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y
   - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

A TMC-SFC model

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y
   - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

3) Identification method:

A TMC-SFC MODEL

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y
   - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

3) Identification method:

   - Numerical calibration

A TMC-SFC model

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y
   - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

3) Identification method:

   - Numerical calibration
   - Reproduce baseline values for model BMW (Godley/Lavoie 2007)

A TMC-SFC MODEL

1) Model assumptions:
    - Two classes: lower class (workers) and upper class (capitalists)
    - Closed economy, no government
    - Two financial assets: bank deposits and corporate securities
    - Firms can set either p or y
    - Banks provide loans and deposits on demand
2) Model structure: 49 equations (25 behavioural)
3) Identification method:
    - Numerical calibration
    - Reproduce baseline values for model BMW (Godley/Lavoie 2007)
4) Simulation technicalities:

A TMC-SFC model

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y
   - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

3) Identification method:

   - Numerical calibration
   - Reproduce baseline values for model BMW (Godley/Lavoie 2007)

4) Simulation technicalities:

   - Language / environment = R

A TMC-SFC MODEL

1) Model assumptions:

   - Two classes: lower class (workers) and upper class (capitalists)
   - Closed economy, no government
   - Two financial assets: bank deposits and corporate securities
   - Firms can set either p or y
   - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

3) Identification method:

   - Numerical calibration
   - Reproduce baseline values for model BMW (Godley/Lavoie 2007)

4) Simulation technicalities:

   - Language / environment = R
   - Time span = 100 periods

A TMC-SFC MODEL

1) Model assumptions:

    - Two classes: lower class (workers) and upper class (capitalists)
    - Closed economy, no government
    - Two financial assets: bank deposits and corporate securities
    - Firms can set either p or y
    - Banks provide loans and deposits on demand

2) Model structure: 49 equations (25 behavioural)

3) Identification method:

    - Numerical calibration
    - Reproduce baseline values for model BMW (Godley/Lavoie 2007)

4) Simulation technicalities:

    - Language / environment = R
    - Time span = 100 periods
    - Simultaneous solutions using 200 iterations

Table 1. Balance sheet

	Workers	Capitalists	Production firms	Commercial banks	$\sum$
Deposits	$+M_w$	$+M_z$		$-M_s$	0
Loans			$-L_d$	$+L_s$	0
Fixed capital			$+K$		$+K$
Securities	$+B_w$	$+B_z$	$-B_s$		0
Balance (net worth)	$-V_w$	$-V_z$	0	0	$-V_h$
$\sum$	0	0	0	0	0

Notes: A '+' before a magnitude denotes an asset, whereas '–' denotes a liability (except for Balance's entries, where signs are reversed); for the sake of simplicity, there is no asset corresponding to capitalists' ownership of firms and banks.

Table 2. Transactions-flow matrix

	Workers	Capitalists	Production firms Current	Production firms Capital	Commercial banks	$\sum$
Consumption	$-C_w$	$-C_z$	$+C$			0
Investment			$+I$	$-I$		0
Memo: Production			[Y]			
Wages	$+WB$		$-WB$			0
Depreciation / Amortisation			$-AF$	$+AF$		0
Firms' profit		$+F_f$	$-F_f$			0
Banks' profit		$+F_b$			$-F_b$	0
Interest on loans			$-PAYM_l$		$+PAYM_l$	0
Interest on deposits	$+PAYM_w^m$	$+PAYM_z^m$			$-PAYM_m$	0
Interest on securities	$+PAYM_w^b$	$+PAYM_z^b$	$-PAYM_b$			0
Change in loans				$+\Delta L_d$	$-\Delta L_s$	0
Change in deposits	$-\Delta M_w$	$-\Delta M_z$			$+\Delta M_s$	0
Change in securities	$-\Delta B_w$	$-\Delta B_z$		$+\Delta B_s$		0
$\sum$	0	0	0	0	0	0

Notes: A '+' before a magnitude denotes a receipt or a source of funds, whereas '–' denotes a payment or a use of funds.

Key equations: the investment function

- Planned real investment is a share of total production:

$$i_T = \beta \cdot y_{-1} \tag{1}$$

Key equations: the investment function

- Planned real investment is a share of total production:

$$i_T = \beta \cdot y_{-1} \tag{1}$$

- Current real (gross) investment is:

$$i = i_{-1} + \gamma_i \cdot (i_T - i_{-1}) \tag{2}$$

Key equations: the investment function

- Planned real investment is a share of total production:

$$i_T = \beta \cdot y_{-1} \tag{1}$$

- Current real (gross) investment is:

$$i = i_{-1} + \gamma_i \cdot (i_T - i_{-1}) \tag{2}$$

- The real stock of capital is:

$$k = k_{-1} + i - \delta \cdot k_{-1} \tag{3}$$

Key equations: the initial finance

- Firms need initial finance to hire workers (and buy investment goods):

$$FIN_i = WB + I \tag{4}$$

Key equations: the initial finance

- Firms need initial finance to hire workers (and buy investment goods):

$$FIN_i = WB + I \tag{4}$$

- Final finance recovered at the end of the period is:

$$FIN_f = C + \Delta B_s - (PAYM_l + PAYM^b_w + PAYM^b_z + F_f) + I \tag{5}$$

Key equations: the initial finance

- Firms need initial finance to hire workers (and buy investment goods):

$$FIN_i = WB + I \tag{4}$$

- Final finance recovered at the end of the period is:

$$FIN_f = C + \Delta B_s - (PAYM_l + PAYM^b_w + PAYM^b_z + F_f) + I \tag{5}$$

- Therefore, the change in loans (stock) at the end of the period is:

$$L_d = L_{d,-1} + FIN_i - FIN_f \tag{6}$$

Key equations: interest payments

- Interest payments on loans are:

$$PAYM_l = r_{l,-1} \cdot L_{d,-1} + r_{l,-1} \cdot \frac{FIN_{f,-1}}{2} \tag{7}$$

Key equations: interest payments

- Interest payments on loans are:

$$PAYM_l = r_{l,-1} \cdot L_{d,-1} + r_{l,-1} \cdot \frac{FIN_{f,-1}}{2} \tag{7}$$

- Interest payments on deposits held by workers are:

$$PAYM_w^m = r_{m,-1} \cdot M_{w,-1} + r_{m,-1} \cdot \frac{FIN_{f,-1}}{2} \cdot \frac{M_{w,-1}}{M_{h,-1}} \tag{8}$$

Key equations: interest payments

- Interest payments on loans are:

$$PAYM_l = r_{l,-1} \cdot L_{d,-1} + r_{l,-1} \cdot \frac{FIN_{f,-1}}{2} \tag{7}$$

- Interest payments on deposits held by workers are:

$$PAYM_w^m = r_{m,-1} \cdot M_{w,-1} + r_{m,-1} \cdot \frac{FIN_{f,-1}}{2} \cdot \frac{M_{w,-1}}{M_{h,-1}} \tag{8}$$

- Interest payments on other assets (deposits held by capitalists and securities) are calculated in the standard way

Key equations: real supply and price level

- Real supply is defined as:

$$y_s = \sigma \cdot y + (1 - \sigma) \cdot y_n \tag{9}$$

Key equations: real supply and price level

- Real supply is defined as:

$$y_s = \sigma \cdot y + (1 - \sigma) \cdot y_n \tag{9}$$

with: $0 \leq \sigma \leq 1$

Key equations: real supply and price level

- Real supply is defined as:

$$y_s = \sigma \cdot y + (1 - \sigma) \cdot y_n \tag{9}$$

with: $0 \leq \sigma \leq 1$

- Potential output is:

$$y_n = y_{n,-1} + \gamma_y \cdot (y_{-1} - y_{n,-1}) \tag{10}$$

Key equations: real supply and price level

- Real supply is defined as:

$$y_s = \sigma \cdot y + (1 - \sigma) \cdot y_n \tag{9}$$

with: $0 \leq \sigma \leq 1$

- Potential output is:

$$y_n = y_{n,-1} + \gamma_y \cdot (y_{-1} - y_{n,-1}) \tag{10}$$

- The unit price is:

$$p = \frac{c \cdot E(p)}{c_{res}} \tag{11}$$

Key equations: real supply and price level

- Real supply is defined as:

$$y_s = \sigma \cdot y + (1 - \sigma) \cdot y_n \tag{9}$$

with: $0 \leq \sigma \leq 1$

- Potential output is:

$$y_n = y_{n,-1} + \gamma_y \cdot (y_{-1} - y_{n,-1}) \tag{10}$$

- The unit price is:

$$p = \frac{c \cdot E(p)}{c_{res}} \tag{11}$$

where:

$$c_{res} = c_z + c_{w,res} = c_z + (y - c_z - i) \tag{12}$$

Figure 1. Sankey diagram of cross-sector transactions

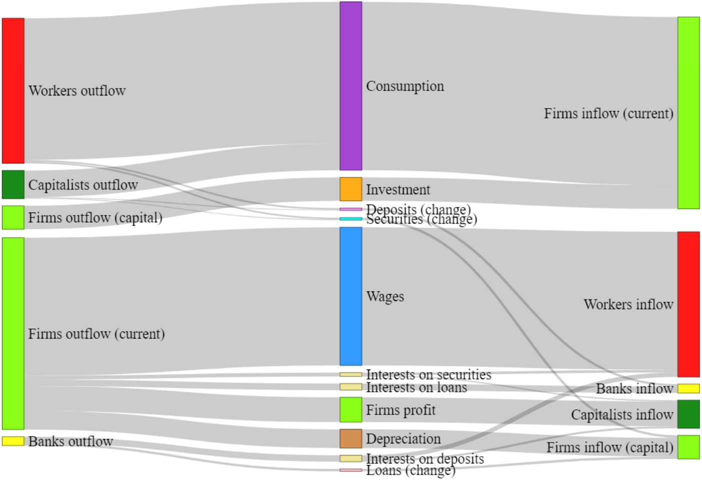
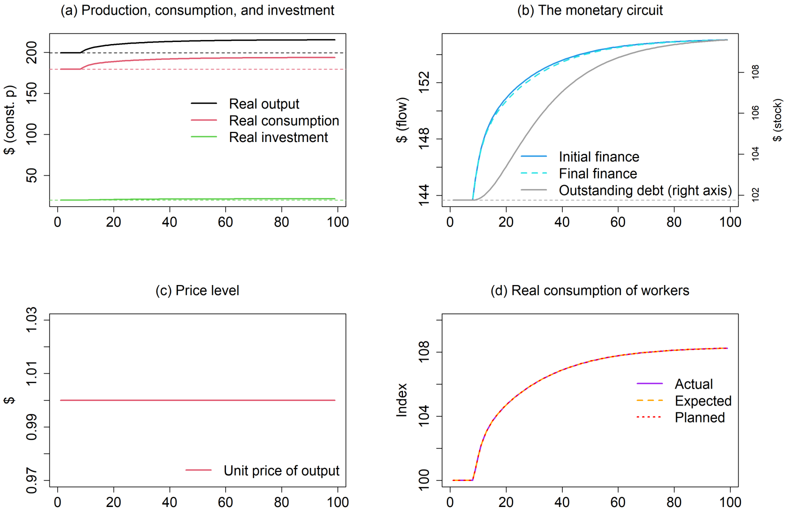


Figure 2. Model baseline and shock to consumption



RQ2: a neoclassical model closure?

- Let us consider an increase in real investment.

RQ2: a neoclassical model closure?

- Let us consider an increase in real investment.

  a) If real supply fully and instantaneously adjusts to demand ($\sigma = 1$), then the steady-state value of workers' consumption is higher

RQ2: A NEOCLASSICAL MODEL CLOSURE?

- Let us consider an increase in real investment.

    a) If real supply fully and instantaneously adjusts to demand ($\sigma = 1$), then the steady-state value of workers' consumption is higher

    b) If real supply does not instantaneously adjusts to demand then:

RQ2: a neoclassical model closure?

- Let us consider an increase in real investment.

  a) If real supply fully and instantaneously adjusts to demand ($\sigma = 1$), then the steady-state value of workers' consumption is higher

  b) If real supply does not instantaneously adjusts to demand then:

     b1) If supply adjusts to demand over time ($\sigma = 0$, $0 < \gamma_y < 1$), then workers' consumption can still grow above the initial level

RQ2: a neoclassical model closure?

- Let us consider an increase in real investment.

  a) If real supply fully and instantaneously adjusts to demand ($\sigma = 1$), then the steady-state value of workers' consumption is higher

  b) If real supply does not instantaneously adjusts to demand then:

     b1) If supply adjusts to demand over time ($\sigma = 0$, $0 < \gamma_y < 1$), then workers' consumption can still grow above the initial level

     b2) If supply is fixed ($\sigma = 0$, $\gamma_y = 0$), then workers' consumption will fall below the initial level

RQ2: A NEOCLASSICAL MODEL CLOSURE?

- Let us consider an increase in real investment.

  a) If real supply fully and instantaneously adjusts to demand ($\sigma = 1$), then the steady-state value of workers' consumption is higher

  b) If real supply does not instantaneously adjusts to demand then:
     b1) If supply adjusts to demand over time ($\sigma = 0$, $0 < \gamma_y < 1$), then workers' consumption can still grow above the initial level
     b2) If supply is fixed ($\sigma = 0$, $\gamma_y = 0$), then workers' consumption will fall below the initial level

- J. Robinson's inflation barrier: faster growth is funded not by the saving of the capitalists, but by the austerity imposed on workers through a lower real wage. Workers are forced to save.

RQ2: A NEOCLASSICAL MODEL CLOSURE?

- Let us consider an increase in real investment.
  a) If real supply fully and instantaneously adjusts to demand ($\sigma = 1$), then the steady-state value of workers' consumption is higher
  b) If real supply does not instantaneously adjusts to demand then:
     b1) If supply adjusts to demand over time ($\sigma = 0$, $0 < \gamma_y < 1$), then workers' consumption can still grow above the initial level
     b2) If supply is fixed ($\sigma = 0$, $\gamma_y = 0$), then workers' consumption will fall below the initial level
- J. Robinson's inflation barrier: faster growth is funded not by the saving of the capitalists, but by the austerity imposed on workers through a lower real wage. Workers are forced to save.
- Not only can workers buy only a share of y, but their c_w can be downsized at any time because of capitalists' plans. No consumer sovereignty!

Figure 3. Higher investment with quantity adjustment

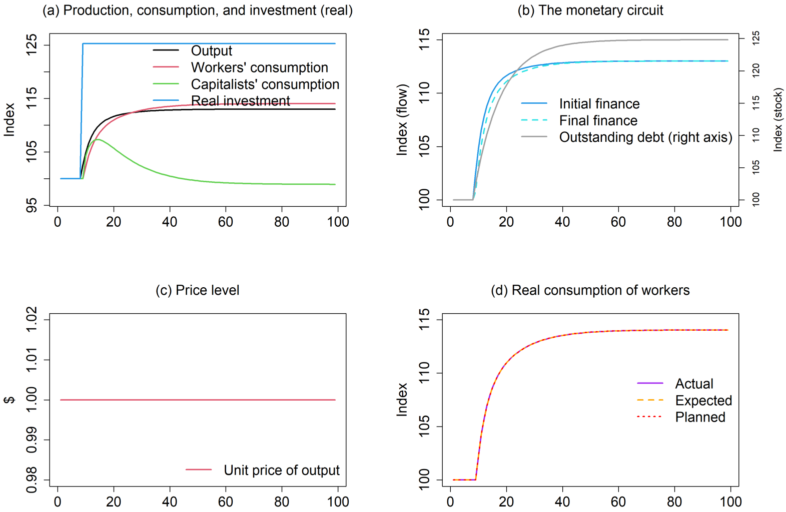


Figure 4. Higher investment with mixed adjustment ($\sigma = 0$)

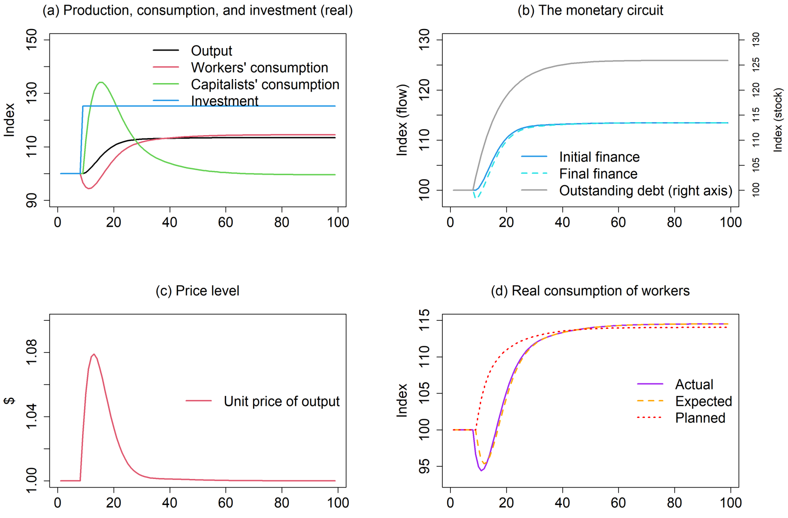
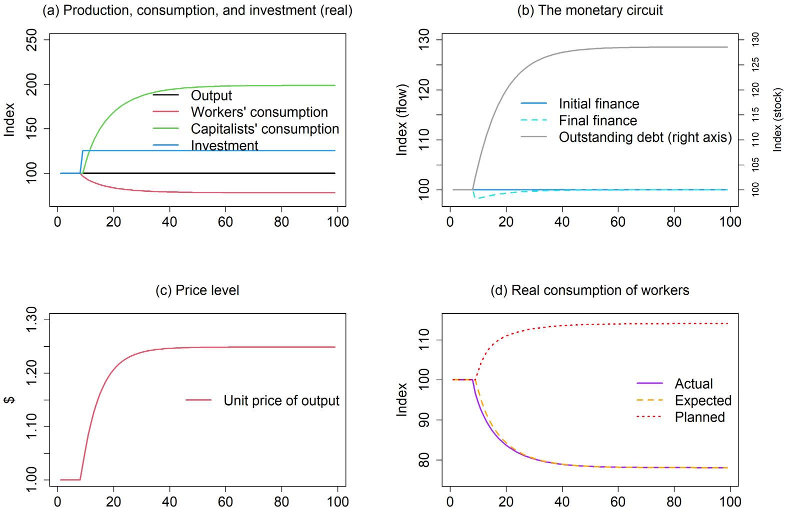


Figure 5. Higher investment with price adj. ($\sigma = 0,\ \delta_y = 0$)



RQ3: production or investment?

- Recall initial finance:

$$FIN_i = WB + I \tag{4}$$

RQ3: production or investment?

- Recall initial finance:

$$FIN_i = WB + I \tag{4}$$

- Recall final finance:

$$FIN_f = C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f) + I \tag{5}$$

RQ3: PRODUCTION OR INVESTMENT?

- Recall initial finance:

$$FIN_i = WB + I \tag{4}$$

- Recall final finance:

$$FIN_f = C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f) + I \tag{5}$$

- The change in loans (stock) at the end of the period is:

$$L_d = L_{d,-1} + WB - [C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f)]$$

RQ3: production or investment?

- Recall initial finance:

$$FIN_i = WB \; + \; I \tag{4}$$

- Recall final finance:

$$FIN_f = C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f) \; + \; I \tag{5}$$

- The change in loans (stock) at the end of the period is:

$$L_d = L_{d,-1} + WB - [C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f)]$$

- Using $Y = C + I$ and $F_f = Y - \sum_i PAYM_i - AF - WB$, we obtain:

$$L_d = L_{d,-1} + I - \Delta B_s - AF \tag{6}$$

RQ3: PRODUCTION OR INVESTMENT?

- Recall initial finance:

$$FIN_i = WB + I \tag{4}$$

- Recall final finance:

$$FIN_f = C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f) + I \tag{5}$$

- The change in loans (stock) at the end of the period is:

$$L_d = L_{d,-1} + WB - [C + \Delta B_s - (PAYM_l + PAYM_w^b + PAYM_z^b + F_f)]$$

- Using $Y = C + I$ and $F_f = Y - \sum_i PAYM_i - AF - WB$, we obtain:

$$L_d = L_{d,-1} + I - \Delta B_s - AF \tag{6}$$

which matches the fourth column of Table 2: ${FIN_i}^{ex\ ante} \rightarrow \Delta L_d(I)^{\ ex\ post}$

RQ4: is consumer credit initial finance?

- Initial does not merely mean new, nor does it refer to a mere historical-time sequence

RQ4: is consumer credit initial finance?

- Initial does not merely mean new, nor does it refer to a mere historical-time sequence
- Rather, logical priority reflecting existing class relations under capitalism

RQ4: IS CONSUMER CREDIT INITIAL FINANCE?

- Initial does not merely mean new, nor does it refer to a mere historical-time sequence
- Rather, logical priority reflecting existing class relations under capitalism
- Bank loans that firms obtain to purchase labour force are of different (class) nature

RQ4: is consumer credit initial finance?

- Initial does not merely mean new, nor does it refer to a mere historical-time sequence
- Rather, logical priority reflecting existing class relations under capitalism
- Bank loans that firms obtain to purchase labour force are of different (class) nature
- It is only money used to hire workers that acts as capital

RQ4: is consumer credit initial finance?

- Initial does not merely mean new, nor does it refer to a mere historical-time sequence
- Rather, logical priority reflecting existing class relations under capitalism
- Bank loans that firms obtain to purchase labour force are of different (class) nature
- It is only money used to hire workers that acts as capital
- Consumer credit is final finance (indirect subsidy to private firms)

RQ4: is consumer credit initial finance?

- Initial does not merely mean new, nor does it refer to a mere historical-time sequence
- Rather, logical priority reflecting existing class relations under capitalism
- Bank loans that firms obtain to purchase labour force are of different (class) nature
- It is only money used to hire workers that acts as capital
- Consumer credit is final finance (indirect subsidy to private firms)
- TMC = abstract representation of the necessary dominant social relations under capitalism

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
   - Explains how money is created and destroyed, abstracting from LP

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
   - Explains how money is created and destroyed, abstracting from LP
   - When money is used as a store of value, it does not act as capital

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*

   - Explains how money is created and destroyed, abstracting from LP
   - When money is used as a store of value, it does not act as capital
   - Money acts as capital when it is used to buy labour force

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
   - Explains how money is created and destroyed, abstracting from LP
   - When money is used as a store of value, it does not act as capital
   - Money acts as capital when it is used to buy labour force
2) Graziani advocates a macro-monetary interpretation of Marx's LTV:

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
   - Explains how money is created and destroyed, abstracting from LP
   - When money is used as a store of value, it does not act as capital
   - Money acts as capital when it is used to buy labour force
2) Graziani advocates a macro-monetary interpretation of Marx's LTV:
   - Capital valorization can only arise from exchanges that firms make *outside* their sector

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*

    - Explains how money is created and destroyed, abstracting from LP
    - When money is used as a store of value, it does not act as capital
    - Money acts as capital when it is used to buy labour force

2) Graziani advocates a macro-monetary interpretation of Marx's LTV:

    - Capital valorization can only arise from exchanges that firms make *outside* their sector
    - The only possible "external exchange" is the purchase of labour power

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
    - Explains how money is created and destroyed, abstracting from LP
    - When money is used as a store of value, it does not act as capital
    - Money acts as capital when it is used to buy labour force
2) Graziani advocates a macro-monetary interpretation of Marx's LTV:
    - Capital valorization can only arise from exchanges that firms make *outside* their sector
    - The only possible "external exchange" is the purchase of labour power
    - Firms can only make a profit if L exceeds the NLT that the workers *recover* by spending their income → "Price of Net Product-Unallocated Purchasing Power" interpretation (Duménil/Foley 2016)

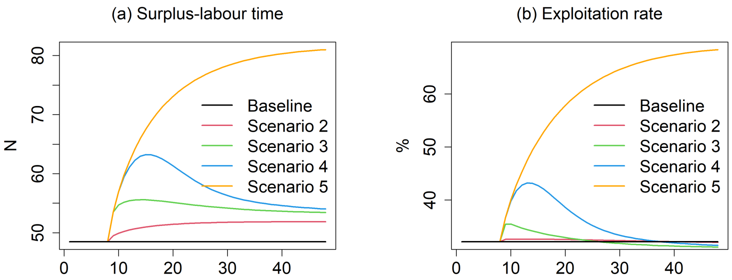
RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
   - Explains how money is created and destroyed, abstracting from LP
   - When money is used as a store of value, it does not act as capital
   - Money acts as capital when it is used to buy labour force
2) Graziani advocates a macro-monetary interpretation of Marx's LTV:
   - Capital valorization can only arise from exchanges that firms make *outside* their sector
   - The only possible "external exchange" is the purchase of labour power
   - Firms can only make a profit if L exceeds the NLT that the workers *recover* by spending their income → "Price of Net Product-Unallocated Purchasing Power" interpretation (Duménil/Foley 2016)
   - The increase in the exploitation rate is only temporary if production eventually adjusts to demand

RQ5: Keynes or Marx?

1) Graziani's seminal works on the TMC is entitled *Moneta senza crisi*
   - Explains how money is created and destroyed, abstracting from LP
   - When money is used as a store of value, it does not act as capital
   - Money acts as capital when it is used to buy labour force
2) Graziani advocates a macro-monetary interpretation of Marx's LTV:
   - Capital valorization can only arise from exchanges that firms make *outside* their sector
   - The only possible "external exchange" is the purchase of labour power
   - Firms can only make a profit if L exceeds the NLT that the workers *recover* by spending their income → "Price of Net Product-Unallocated Purchasing Power" interpretation (Duménil/Foley 2016)
   - The increase in the exploitation rate is only temporary if production eventually adjusts to demand
   - No consumer sovereignty ← exploitation in the production sphere

Figure 7. Surplus labour under alternative scenarios



Notes: Scenario 2 = higher autonomous consumption; Scenario 3 = higher investment with quantity adjustment; Scenario 4 = higher investment with mixed adjustment; Scenario 5 = higher investment with price adjustment

Final remarks

Main findings:

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM
2) Real supply $\rightarrow$ no neoclassical influence, rather single period, money creation and class relations

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM
2) Real supply $\rightarrow$ no neoclassical influence, rather single period, money creation and class relations
3) Production is *ex-ante* financed, investment is *ex-post* funded

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM
2) Real supply $\rightarrow$ no neoclassical influence, rather single period, money creation and class relations
3) Production is *ex-ante* financed, investment is *ex-post* funded
4) Consumer credit is final finance, not initial finance

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM
2) Real supply $\rightarrow$ no neoclassical influence, rather single period, money creation and class relations
3) Production is *ex-ante* financed, investment is *ex-post* funded
4) Consumer credit is final finance, not initial finance
5) TMC $=$ Marxian rendition of Keynes's method of aggregates

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM
2) Real supply $\rightarrow$ no neoclassical influence, rather single period, money creation and class relations
3) Production is *ex-ante* financed, investment is *ex-post* funded
4) Consumer credit is final finance, not initial finance
5) TMC = Marxian rendition of Keynes's method of aggregates

A radical view: workers are not sovereign in the goods market because they lack control in the production sphere

Final remarks

Main findings:

1) The TMC can be easily framed within a bank-money SFCM
2) Real supply $\rightarrow$ no neoclassical influence, rather single period, money creation and class relations
3) Production is *ex-ante* financed, investment is *ex-post* funded
4) Consumer credit is final finance, not initial finance
5) TMC = Marxian rendition of Keynes's method of aggregates

A radical view: workers are not sovereign in the goods market because they lack control in the production sphere

Money (as initial finance = capital) is an instrument of class domination

Thank you

Download this presentation from *marxianomics*:
www.marcopassarella.it