Financialisation, Fiscal Withdrawal and Real Wage Repression: The dynamics of macroeconomic instability in a Stock-Flow -Consistent framework

Tajkira Khandoker

PhD Candidate, The University of Newcastle, Australia

The Hyman P. Minsky Summer Conference, June 27-29, 2010
The Levy Economics Institute of Bard College, Annandale-on-Hudson, NY

What will cover

1. Introduction
2. A decades of contributions in the Stock-flow modeling
3. Motivations for the study
4. Objectives of this study
5. Other Methodological issues
6. Expected outcomes, significance or rationale
7. Conclusion
8. References

Introduction

◉ The purpose of this presentation is to explain the motives behind research that I will be conducting for my PhD thesis.

◉ The 2007-2009 Global Financial Crisis (GFC) provides the context for this research.

◉ This crisis began as a localized financial disturbance due to the collapse of the US real estate boom and was quickly transformed from a banking crisis into a global economic downturn

◉ In, 2009 major developed economies found themselves in a deep recession rivaling that of the Great Depression of the late 1920's demonstrating that macroeconomists cannot ignore the effect of financial relations over the real economy.

Introduction

What are the driving forces to the GFC?

◉ Agreement & Disagreement about the driving forces of GFC.

◉ Many Post Keynesian economists follow Hyman P. Minsky in arguing that financial crises of this kind are a systemic problem

◉ It creates through internal market processes that allow fragility to build up over time.

◉ Since the beginning of the GFC, Minsky's ideas have attracted unprecedented interest, with many economist—both orthodox and heterodox—calling this a 'Minsky moment'

◉ e.g. Kregel(2007); Lahart(2007); Magnus(2007a, 2007b,2007c, 2008); Wolf (2007, 2008); Davidson, 2008); Wray and Tymoigne(2008); Wray(2009); Whalen(2008); Cassidy(2008)

Introduction

Financialisation & GFC:

◉ Minsky's FIH suggests that fragility evolves within capitalist economies through endogenous changes to the balance sheet positions of households, firms and banks.

◉ The severity of the current GFC has been linked by many Post Keynesians to the process of financialisation :Eatwell et al(2008) Lavoie(2008a); Mouakil (2008), Skott & Ryoo(2008b), Stockhammer(2008, 2009), Stockhammer et al(2009); Treeck(2008); Tymoigne (2009a, 2009b).

◉ Skott and Ryoo (2008) defines financialisation in terms of:

a decline in the retention rate of companies & the use of equity raising as a means of financing corporate investment, secular rise in real rates of interest,

an increase in corporate debt as a proportion of total capital &personal consumption as a proportion of personal disposable and a rise in income.

◉Commentators have acknowledged that Minsky anticipated many of the features of financialisation that characterize the present crisis.

Introduction

◉ This study focuses on the two other major drivers that have reduced financial sustainability:

1. Policies of fiscal withdrawal
2. Real wages repression within labor markets

◉ The role of these driving forces behind the GFC will be specifically discussed in terms of the Modern Money Viewpoint

◉ To capture the dynamics of a capitalist economy our research will be conducted within the Stock-Flow-Consistent (SFC) framework of macroeconomic modeling

◉ This model will explicitly incorporate a government sector to examine macroeconomic instability follows Godley & Lavoie(2007) approach.

A Brief look at the contributions in the Stock-flow modeling

◉ Since, the beginning of the decade contributions to the literature on SFC macroeconomic modeling have burgeoned,

◉ Because this approach can capture interactions between real and financial variables in a single, coherent frame work.

◉The following material provides an overview of major contributions to this strand of the literature.

◉Since, Godley & Cripps(1983) set out a simple model inspired by research by the late Wynne Godley to explain the capitalist dynamics, many contributions have been observed to developed this modeling woks in many different directions.

◉ For examples, Taylor & O'Connell (1985); Franke & Semmler (1991); Gatti &Gallegati(1992), Gatti et al.(1990), Gatti et al (1994), however, as Lavoie(2008) sees that none of them were quite stock-flow before the came out of the prominence work of Lavoie & Godley(2001)

A Brief look at the contributions in the Stock-flow modeling

◙Taylor (2004) in his Macroeconomic text, constructed a simplified version of the Lavoie and Godley (2001) model and argued that the source of instability can be traced to the fact that higher levels of economic activity lead to higher leverage or debt-to-equity ratios for firms.

◙ This issue is further taken by Charles (2008a &2008b) in a simple Post-Keynesian model and analyses LR instability using phase diagrams along the lines of earlier Kaleckian research by Dutt (1995) and (Jarsulic, 1989).

◙ Tymoigne (2006 part 3) distinguishes short-term and long-term borrowing within a system dynamics approach while similar boom and bust cycles arise in Mouakil's(2008) analysis.

◙However, Heron & Mouakil (2008) track the portfolio decisions of the banking system by expanding their model to account for five sectors: government, firms, households, private banks and households. Another paper by Eatwell et al., (2008) works captures important aspects of the modern financial system & drivers of the GFC, however government sector has not included explicitly

◙Household indebtedness and income distributional issues are taken up in a number of recent studies Hein (2006a, 2006b, 2008, 2009); Hein& Van (2007); Palley (1994, 1996, 2006,& 2009)

A Brief look at the contributions in the Stock-flow modeling

◙ The originial Lavoie & Godley (2001) model was extended by Zezza & Dos Santos (2004) to incorporate a government sector and central bank, so that high powered money creation could be examined.

◙ The subsequent text by Godley & Lavoie (2007b)—*Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth*—incorporates similar features

◙ Zezza (2008) extends the Godley & Lavoie (2007b) model by including a mortgage market to demonstrate how housing bubbles can arise

◙ The original G&L (2001) was further taken up Skott & Ryoo (2008a & 2008b) except the consumption function. To incorporate the Minsky's insights the model is further extended in Ryoo (2009)

◙ Van Treeck's (2008) analysis tracks the evolution of the debt ratio of both firms to highlight the importance of the financialisation process as a source of financial instability.

A Brief look at the contributions in the Stock-flow modeling

◉ Dafermos (2009) includes preference for liquidity on the part of different agents within the private sector

◉Chatelain (2010) has modeled European unemployment, investment and distribution issues and able to track conditions under which a growing economy can be rendered unstable either through a rise of interest rates or fall in public expenditure

◉ Sarquis &Oreiro (2010)focuses on influences over financial fragility that derive from variations in the sovereign risk of capital, deploying capital structure indexes to separate one causal influence from another

And here I'm.

Motivations for the study

Although the above mentioned models emphasized on the linkage between financialisation and financial fragility, a growing number of recent studies have shown that both fiscal withdrawal and real wage repression have been important drivers of the GFC.

Godley & Lavoie (2007a); Lavoie (2008); Juniper (2009); Juniper & Mitchell(2008); Stockhammer (2009); Stockhammer, Onaran, & Gragl (2009);Mitchell (2009); Wray (2009)

These study shows that

◉ under the neoliberal mode of regulation and the finance-dominated accumulation regime, power has shifted from labour to capital

◉ wage share has been declining as a proportion of national income

◉ 'wage moderation' is one of the structural causes of underlying the present crisis

◉ Real wage repression has contributed to the current crisis because rates of accumulation could only be preserved by lending more and more to those less and less likely to repay their outstanding obligations.

Motivations for the study

◉ By examining the historical behaviour of key macroeconomic aggregates, evidence for this conjecture is relatively easy to find.

◉ Data on the wage share of national income is available for USA and most OECD nations. In Australia, wage share is published by the Treasury

◉All the logic that justified government cut backs in the last three decades;

• the run-down of public infrastructure;
•the harsh treatment of welfare recipients;
•the wasteful privatisations,

•the neo-liberal litany served to transfer wealth from poor to rich
•create a disadvantaged underclass.

Motivations for the study

◉ Empirical evidence in Australia

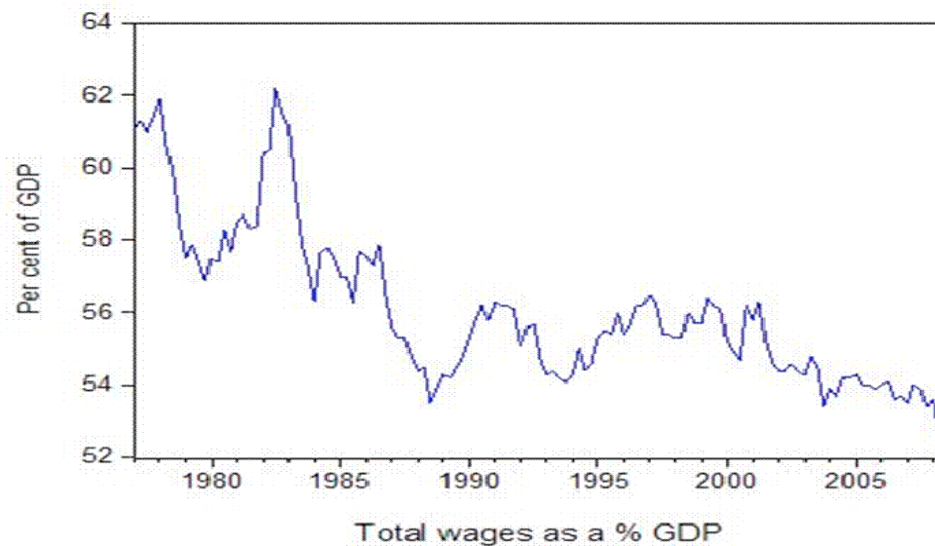This graph applies to Australia but the trend is apparent in most countries.

Figure 1: Wage share in GDP

Source: Billiy Blog(http://bilbo.economicoutlook.net/blog); "It will only take 6 months"; Monday, May 10th, 2010
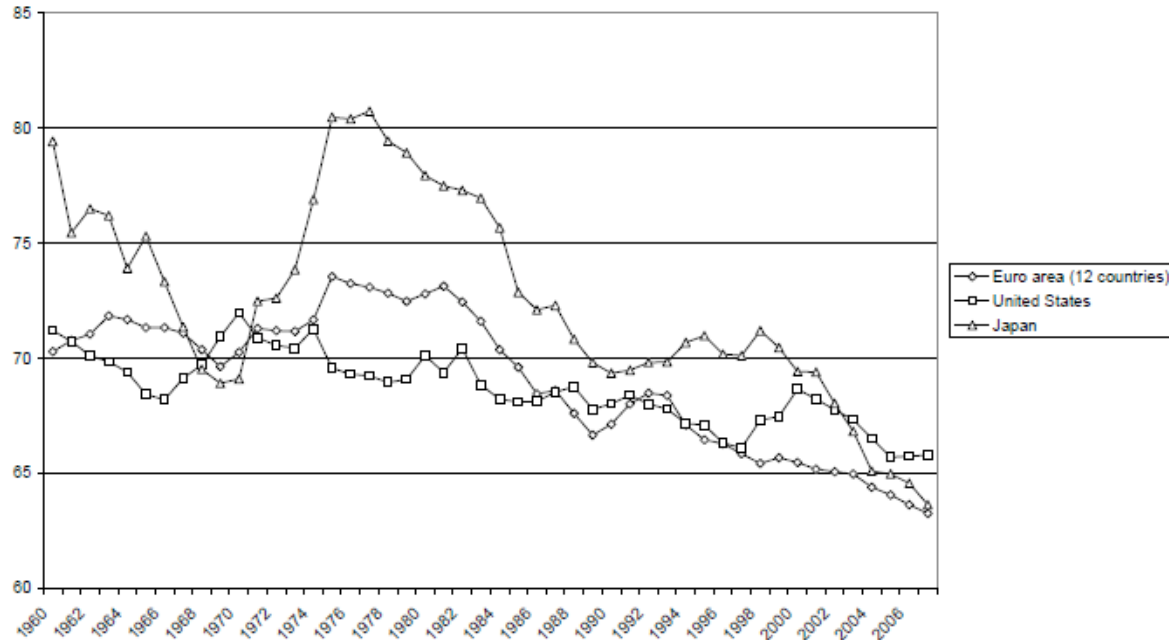
Motivations for the study

◉ Evidence from OECDs:

Figure 2: Adjusted wage shares in the Euro area, the USA and Japan

Source: AMECO (Stockhammer, 2009 , p.31)

Modern Money View

◉This crisis has categorically re-affirmed the lesson that we learned during the Great Depression - free markets" do not work effectively.

◉The policy folly of the last few decades shows that governments need to firmly steer the ship along the lines outlined in Abba Lerner's writings on functional finance (Lerner, 1941, 1943, 1944 and 1951)

◉ Over the last 2-3 decades most Western governments including the Australian government succumbed to the neo-liberal myth of Fiscal Withdrawal which allowed the destructive dynamics of the capitalist system to create an economic structure that was ultimately unsustainable

◉ In Australia the pursuit of budget surpluses actually created an economy which was always going to be susceptible to a crisis of the type the World is now experiencing (Bill Mitchel 2009)

Modern Money View

◉ From the MMV study of Wray(1998); Mitchell& Muysken(2008) and Juniper & Mitchell (2008) the relationship between fiscal withdrawal and private sector net-dis-saving can be discussed.

◉As a matter of national accounting, the sovereign government deficit (surplus) equals to non-government surplus (deficit).

◉ In aggregate, there can be no net savings of financial assets of the non-government sector without cumulative government deficit spending

◉ In their SFC analysis Godley& Lavoie(2007a) argued that

> If the fiscal stance is not set in the appropriate fashion- that is, at a well-defined level and growth rate-then full employment and low inflation will not be achieved in a sustainable way. It was also shown that fiscal policy on its own could achieve both full employment and a target rate of inflation.

Modern Money View

◉ The following accounting relation, often erroneously called the Government Budget Constraint (GBC) can be used to show the impact of budget surpluses on spending and private wealth:

$$G + iB = \Delta M + T + \Delta B$$

$$[(G + iB) - T] = \Delta M + \Delta B$$

Where, G is government spending on net of interest payments on debt, i, the nominal bond rate, B is the stock of outstanding bonds, M is base money balances, and T is tax revenue.

◉ In an accounting sense, when there is a budget surplus this must either be reflected in a destruction of base money ($\Delta M < 0$) and/or a destruction of private wealth ($\Delta B < 0$)

◉ GBC considers to be an *ex post* accounting identity rather than an *ex ante* financial constraint.

◉ Effectively, it shows that if the sovereign government runs cumulative surpluses which destroy net financial assets then the non-government must accumulate deficits.

Modern Money View

◉ The graph shows the history of the Australian Commonwealth budget deficit **as a percentage of GDP** over the period from 1970-71 to 2008-09.

◉ It can be clearly seen that after each period of budget surpluses the deficit re-emerges.

Figure 3: History of the Commonwealth Budget Deficit as a % of GDP
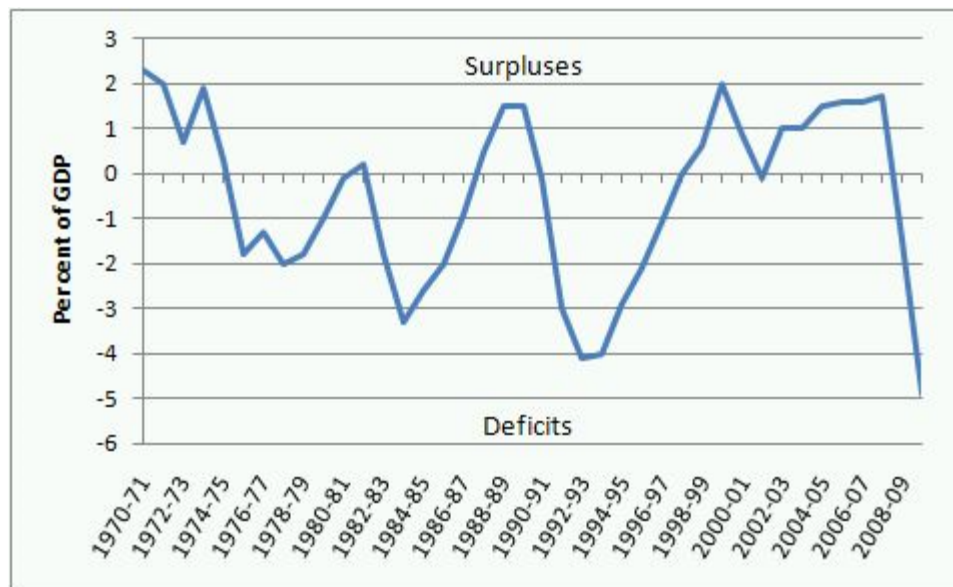
Objectives of this study

The role of both fiscal withdrawal and real wage repression in driving the financial instability has been acknowledged, but have not been adequately analysed by other relevant Post Keynesian modelling literatures.

◉ To this end, the study proposes to construct a tractable and parsimonious stock-flow-consistent (SFC) accounting framework to support a macroeconomic analysis of these key aspects of the subprime crisis.

◉ Essentially study will draw on earlier research by G& L(2007a &2007b); Lavoie (2008a); Dos Santos(2005); Dos Santos &Zezza(2008); Zezza (2008); Heron &Mouakil (2008); Van Treeck (2008); (Skott & Ryoo (2008b) and Ryoo (2009)

◉ The notion that fiscal conservatism on the part of the state contributed to the severity of the 2007-2009 economic recession will be exposed to rigorous analysis through formal model building and simulation.

◉ The resulting model must have a structure rich enough to capture the major interrelations between real and financial markets

Objectives of this study

In his own analysis of these interactions, Treeck (2008) concedes that:

> "In a more complete and empirically oriented analysis a number of important extensions would have to be made. To begin with, one would have to consider the implications of financialisation with respect to the government and foreign sectors"

Similarly, Skott & Ryoo (2008b)openly acknowledge the gaps in their own analysis of financial fragility:

> "(i) We limit ourselves to a closed economy, (ii) the emphasis is on the medium- and long-run effects with little or no attention to questions of stability and short-run fluctuations, and (iii) we ignore fiscal policy altogether and our treatment of monetary policy is kept almost embarrassingly simple (iv) From the Minskyan perspective our focus in this paper may be misleading and our neglect of the dynamic interactions underlying the observed changes in financial behaviour represents a major limitation".

To explain the dynamics of GFC, Professor Lavoie (2008, p.352) suggests to set at least Two banks as well as adding the financial innovations in balance sheet.

Objectives of this study

◉ According to my understanding the above mentioned issues haven't been explicitly modeled so far and this study has the objectives to tackle some of the issues within the SFC approach

◉ Nevertheless, this would make the resulting model much more complex.

◉ An alternative approach might be to invest more effort in characterising factors responsible for growing financial fragility.

◉ Minsky's well-known three-fold taxonomy of financial units—hedge, speculative, and Ponzi—will be used to account for the endogenous growth in the fragility of banks, households and firms.

◉ Constructive approaches to the formalisation of Minsky's FIH suggested by Vercelli (2009a & 2009b) will be examined further below.

Vercelli claims that Minsky's FIH can describe

◉ The process of financial crisis and recovery

◉ It clearly rejects the regularity assumption - that is economic phenomena are well behaved and regularly patterned.

◉ In contrast, Minsky articulates a vision in which the following plays crucial role:

- instability,
- limited rationality, and
- disequilibrium,
- subjective features

Vercelli's (2009) Modification of Minsky's Financial Taxonomy

◉ Nevertheless, Vercelli also argues that, in its original form, Minsky's model suffers from two weaknesses:

First, all the units , even the Ponzi units, are considered solvent, as they satisfy the stipulated solvency condition.

Second, Minsky's taxonomy is based on three discrete categories.

◉ To make Minsky's approach more susceptible to formal modelling and simulation, Vercelli re-configures Minsky's classification of hedge, speculative, and Ponzi units by basing each on two indexes:

1. the current liquidity of the unit and

2. its expected solvency

◉ As Vercelli sees it, this index of solvency plays a crucial role in Minsky's analysis of the dynamics of a unit's financial conditions and their possible shifts to different categories of the taxonomy

Vercelli's (2009) Modification of Minsky's Financial Taxonomy

Table 1: Relationship between Minsky's and this paper's taxonomies: rules of translation

Financial units	Minsky $m_{it} = y_{it} - e_{it}$ $m_{it}^* = \sum_{s=0}^{n} \dfrac{E[m_{it+s}]}{(1+r)^s}$		This paper $k_{it} = e_{it}/y_{it}$ $k_{it}^* = \dfrac{\sum_{s=0}^{n} E[e_{it+s}]/(1+r)^s}{\sum_{s=0}^{n} E[y_{it+s}]/(1+r)^s}$	
Hedge unit	$m_{it} > 0,$ $E(m_{it}) > 0$ $m_{it}^* > 0,$	$t = 0$ $1 \le t \le n$ $1 \le t \le n$	$k_{it} < 1,$ $E(k_{it}) < 1$ $k_{it}^* < 1,$	$t = 0$ $1 \le t \le n$ $1 \le t \le n$
Speculative unit	$m_{it} < 0,$ $E(m_{it}) < 0,$ $E(m_{it}) > 0,$ $m_{it}^* > 0$	$t = 0$ $t < s < n, s\ small$ $s \le t \le n$ $1 \le t \le n$	$k_{it} > 1,$ $E(k_{it}) > 1$ $E(k_{it}) < 1$ $k_{it}^* < 1$	$t = 0$ $t < s < n, s\ small$ $s \le t \le n$ $1 \le t \le n$
Ponzi unit	$m_{it} < 0,$ $E(m_{it}) < 0$ $E(m_{it}) \gg 0$ $m_{it}^* < 0,$	$t = 0$ $1 \le t \le n\text{-}1$ $t = n$ $1 \le t \le n\text{-}1$	$k_{it} > 1$ $E(k_{it}) > 1$ $E(k_{it}) \ll 1$ $k_{it}^* > 1$	$t = 0$ $1 \le t \le n\text{-}1$ $t = n$ $1 \le t \le n\text{-}1$

Other Methodological Issues

◙ The propposed SFC model will explicitly incorporate a government sector and construct a logically coherent sets of accounts based in that sense, "every flows comes from somewhere and goes somewhere".

◙ In summery this to build this SFC model entails the following steps:

1. Structural framework- number of sectors of the economy
2. Constructing the BS or stock matrix.
3. On this basis, deriving a congruent TS matrix or flow matrix.
4. Constructing appropriate behavioral equations
5. Calibrating the model for simulation purpose
6. Portraying components of the model using of block diagrams
7. Determining values for the parameters and for exogenous variables and initial stocks based on some combination of empirical data and hypothetical values.
8. Gathering the requisite data from National Income Accounts (NIA) and other sources complied by the Australian Bureau of Statistics.

Expected Outcomes, significance or rationale

1. To determine the how the fiscal withdrawal and Real wage repression has aggravated the recurrent financial crises.

2. To optimally evaluate financial regulations designed to achieve macroeconomic stability

3. To help the policy makers to design appropriate policies and early warning systems to avoid the severe negative effects of forthcoming crisis

Conclusion

◉ The study foreshadowed in this paper intends to examine the contribution that real wage repression and fiscal withdrawal have provoked the GFC.

◉ This analysis will incorporate Minsky's FIH within a rigorous SFC accounting framework

◉ The empirical data examined above suggest that the above drivers, together with a growth in financialisation, have detracted from fiscal sustainability, precipitating the GFC and slowing the subsequent recovery from the global downturn in the real economy.

◉ By way of a conclusion to the tentative arguments made in this paper, I would like to quote from Whalen's (2009) study,

> "Minsky used to say we should stand on the shoulders of giants to better understand the economy. Just as he stood on the shoulders of   Keynes and Schumpeter, we can now stand on his shoulders to understand and address the current global recession".

References

BOYER, R. (2000) Is a Finance-led growth regime a viable alternative to Fordism? A preliminary analysis. *Economy and Society,* 29**,** 111–145.

CASSIDY, J. (2008) The Minsky moment. *The New Yorker.*

CHARLES, S. (2008a) Corporate debt, variable retention rate and the appearance of financial fragility. *Camb. J. Econ.,* 32**,** 781-795.

CHARLES, S. (2008b) A Post-Keynesian Model of Accumulation with a Minskyan Financial Structure. *Review of Political Economy,* 20**,** 319-331.

CHATELAIN, J.-B. (2010) THE PROFIT–INVESTMENT–UNEMPLOYMENT NEXUS AND CAPACITY UTILIZATION IN A STOCK-FLOW CONSISTENT MODEL. *Metroeconomica,* 61**,** 454-472.

DAFERMOS, Y. (2009) Inflation, Employment and Liquidity Preference in a Stock-Flow Consistent Model. *13th Conference of the Research Network Macroeconomics and Macroeconomi Policies (RNM), The World Economy in Crisis-The Return of Keynesianism.* Berlin.

DAVIDSON, P. (2008) Is the current financial distress caused by the subprime mortgage crisis a Minsky moment? or is it the result of attempting to securitize illiquid noncommercial mortgage loans? *Journal of Post Keynesian Economics,* 30**,** 669-676.

DOS SANTOS, C. H. (2005) A stock-flow consistent general framework for formal Minskyan analyses of closed economies. *Journal of Post Keynesian Economics,* 27**,** 711-735.

DOS SANTOS, C. H. & ZEZZA, G. (2008) A SIMPLIFIED, 'BENCHMARK', STOCK-FLOW CONSISTENT POST-KEYNESIAN GROWTH MODEL. *Metroeconomica,* 59**,** 441-478.

DUTT, A. K. (1995) Internal finance and monopoly power in capitalist economies: A reformation of Steindl's growth model. *Metroeconomica,* 46**,** 16-34.

DYMSKI, G. A. (2010) Why the subprime crisis is different: a Minskyian approach. *Camb. J. Econ.,* 34**,** 239-255.

EATWELL, J., MOUAKIL, T. & TAYLOR, L. (2008) Liquidity , Liverrage and the impact of sub-prime turbulence. Centrer for Finanacial Analysis and Policy, Judge Business School, University of Cambridge.

FRANKE, R. & SEMMLER, W. (1991) *A dynamical macroeconomic growth model with external financing of firms: A numerical stability analysis in E.J. Nell and W.Semmler,Nicholas Kaldor and Mainstream Economics: Confrontation or Convergence?,* London, Macmillan.

References

GATTI, D. & GALLEGATI, M. (1992) "Imperfect information, corporate finance, debt commitments, and business fluctuations", in S. Fazzari and D.B. Papadimitriou (eds), . *Financial Conditions and Macroeconomic Performance: Essays in Honor of Hyman P. Minsky.* Armonk, Mé.E. Sharpe.

GATTI, D., GALLEGATI, M. & GARDINI, L. (1990) Real accumulation and financial instability: A model of profit flows, debt commitments and capital asset prices. *Studi Economici,* 41**,** 101- 126.

GATTI, D., GALLEGATI, M. & MINSKY, H. P. (1994) "Financial institutions, economic policy, and the dynamic behaviour of the economy". New York, The Levy Economics Institute of Bard College.

GODLEY, W. & CRIPPS, F. (1983) *Macroeconomics,* London, Fontana.

GODLEY, W. & LAVOIE, M. (2007a) Fiscal policy in a stock-flow consistent(SFC) model. *Journal of Post Keynesian Economics,* 30**,** 79-100.

GODLEY, W. & LAVOIE, M. (2007b) *Monetary Economics: An Integrated Approach to Credit, Money, Income, Production and Wealth,* Macmillan, London.

HEIN, E. (2006a) Interest, Debt and Capital Accumulationâ€"A Kaleckian Approach. *International Review of Applied Economics,* 20**,** 337 - 352.

HEIN, E. (2006b) *Money, Distribution Conflict and Capital Accumulation: Contributions to Monetary Analysis,* London, Palgrave/Macmillan.

HEIN, E. (2008) Financialisation in a comparative static, stock-flow consistent Post-Kaleckian distribution and growth model. *IMK Working Paper 21/2008.* Macroeconomic Policy Institute.

HEIN, E. (2009) A (Post) Keynesian perspective on 'financialisation'. Dusseldorf, Germany, Macroeconomic Policy Institute (IMK).

HEIN, E. & VAN, T. T. (2007) Financialisation in Kaleckian/post-Kaleckian Models of Distribution and Growth. *IMK Working Paper 7/2007.* Macroeconomic Policy Institute.

HERON, L. E. (2009) The macroeconomic impact of the fiancial crisis in a Post-Keynesian Model. *4th GARNET Annual Conference; The Financial crisis: Origins, Response, and Real-World Impact.* Rome.

HERON, L. E. & MOUAKIL, T. (2008) A post-Keynesian stock-flow consistent model for dynamic analysis of monetary policy shock on banking behaviour. *Metroeconomica,* 59**,** 405-440.

JARSULIC, M. (1989) Endogenous credit and endogenous businesscycles. *Journal of Post Keynesian Economics,* 12**,** 35-48.

KEYNES, J. M. (1936) *The General Theory of Employment, Interest and Money,* London, Macmillan.

KHALIL, S. (2009) Price Formation, Income Distribution, and Business Cycles in a Stock-Flow Consistent Monetary Model. *Economics and Management.* University of Trento, Italy.

References

KREGEL, J. (2007) Minsky's 'cushoins of safety', systemic risk and the crisis in the US subprime mortgage market. Annandale-on-Hudson.

LAHART, J. (2007) In time of tulmot, obscure economist gains currency. *The Wall Street Journal.*

LAVOIE, M. (2005) Cadrisme with Kaleckian model of growth and distribution. *ROBINSON Working Paper No. 06-05.* University of Ottawa.

LAVOIE, M. (2008a) Financialisation Issues in a Post-Keynesian Stock-flow Consistent Model *European Journal of Economics and Economic Policies,* 5 331-356.

LAVOIE, M. (2008b) Towards a post-Keynesian consensus in macroeconomics: Reconciling the Cambridge and Wall Street views. *12th conference of the Research Netwrok Macroeconomics and Macroeconomic Policy, Macroeconomic Policies on Shaky foundations-Wither mainstream economics.* Berlin, Germany.

LAVOIE, M. & GODLEY, W. (2001) Kaleckian models of growth in a coherent stock-flow monetary framework: a Kaldorian view. *Journal of Post Keynesian Economics,* 24**,** 277.

MAGNUS, G. (2007a) The Credit Cycle and Liquidity: Have We Arrived at a Minsky Moment? *Economic Insights,March 6.* UBS Investment Research

MAGNUS, G. (2007b) The Credit Cycle: Getting Closer to a Minsky Moment? *Economic Insights, July 3.* UBS Investment Research.

MAGNUS, G. (2007c) What this Minsky Moment Means. *Financial Times.*

MAGNUS, G. (2008) Is there Time to Avert a Minsky Meltdown? *Financial Times.*

MINSKY, H. P. (1975) *John Maynard Keynes,* Cambridge, Cambridge University Press.

MINSKY, H. P. (1984) Banking and Industry Between the Two Wars: The United States. *Journal of European Economic History***,** 235-272.

MINSKY, H. P. (1996) The essential characteristics of Post-Keynesian economics. IN DELEPLACE, G. & NELL, E. J. (Eds.) *Money in Motion. The Post-Keynesian and circulatiion Approaches* London, Macmillan.

References

MITCHELL, W. (2009) A modern monetary perspective on the crisis and a reform agenda *11th Path to Full Employment Conference.* Centre of Full Employment and Equity (CofEE), The University of Newcastle, Australia.

MITCHELL, W. F. & MUYSKEN, J. (2008) *Full employment abondoned: shifting sands and policy failures*, Edward Elger, Aldershot.

MOUAKIL, T. (2008) Financial Keynesianism counterattacks: A Minsky crisis in a Tobin-Kalecki model. Centre for Financial Analysis and Policy, Judge Business School, University of Cambridge.

NIKOLAIDI, M. (2009) Banking System and Financial Fragility in a Post Keynesian Model. *13th Conference of the Research Network Macroeconomics and Macroeconomic Policies, The World Economy in Crisis - The Return of Keynesianism?* Berlin, Germany.

PALLEY, T. I. (1994) Debt, Aggregate Demand, and the Business Cycle: An Analysis in the Spirit of Kaldor and Minsky. *Journal of Post Keynesian Economics,* 16**,** 371-390.

PALLEY, T. I. (1996) *Post-Keynesian Economics: Debt, Distribution and the Macro Economy,* London, Macmillan.

PALLEY, T. I. (2006) Class conflict and the Cambridge theory of income distribution IN HEIN, E., HEISE, A. & TRUGER, A. (Eds.) *Wages, Employment, and Distribution and Growth.* Basingstoke, International Perspective,Palgarve Macmillan.

PALLEY, T. I. (2009) Inside Debt and Economic Growth: A Cambridge -Kaleckian Analysis. *IMK Working Paper No. 2/2009.* Dusseldorf, Germany, Macroeconomic Policy Institute.

RYOO, S. (2009) Long Waves and short cycles in a model of endogenous financial fragility. *Working Paper 2009-03.* Amherst, University of Massachusetts.

SARQUIS, A. M. F. & OREIRO, J. L. (2010) A Stock and Flow Consistent Post-Keynesian Model for an Open Economy with Imported Intermediary Inputs and Ex-Ante Portfolio Allocation. Department of Economics, University de Brasìlia.

SKOTT, P. & RYOO, S. (2008a) Financialisation in Kaleckian economics with and without labor constraints. *Working paper 2008-05.* Amherst, University of Massachuetts.

SKOTT, P. & RYOO, S. (2008b) Macroeconomic implications of financialisation. *Camb. J. Econ.,* 32**,** 827-862.

STOCKHAMMER, E. (2008) Some Stylized Facts on the Finance-dominated Accumulation Regime. *Compettition & Change,* 12**,** 184-202.

STOCKHAMMER, E. (2009) The finance-dominated accumulation regime, income distribution and present crisis. *Working Paper Series No. 127.* Department of Economics, Vienna University of Economics & B.A.

STOCKHAMMER, E., ONARAN, O. & GRAGL, L. (2009) The finance-dominated growth regime, distribution, and aggregate demand in the US. *Department of Economics Working Paper Series No 126.* Vienna University of Economics & B.A.

TAYLOR, L. (2004) *Reconstructing Macroeconomics. Structuralist Proposals and Critiques of the Mainstream,* Cambridge, Harvard University Press.

TAYLOR, L. (2008) A foxy hedgehog: Wynne Godley and macroeconomic modelling. *Camb. J. Econ.,* 32**,** 639-663.

TAYLOR, L. & O'CONNELL, S. A. (1985) A Minsky Crisis. *The Quarterly Journal of Economics,* 100**,** 871-885.

TREECK, T. V. (2008) A synthetic, stock-flow consistent macroeconomic model of 'financialisation'. *Cambridge Journal of Economics* 27 (1)**,** 1-27.

TYMOIGNE, E. (2006) The Minskyan System, Part III: System Dynamics Modeling of Stock-Flow-Consistent Minskyan Model. *Working Paper No. 455*. Annandale-on-Hudson, New York, The Levy Economics Institute of Bard College.

TYMOIGNE, E. (2009a) Central Banking, Asset Prices and Financial Fragility. London, Routledge.

TYMOIGNE, E. (2009b) Securitization, Deregulation,Economic Stability, and Financial crisis, Part II Deregulation, the Financial crisis, and Policy Implications. The Levy Economics Institute of Bard College.

VERCELLI, A. (2009a) Minsky Moments, Russel Chickens, and Gray Swans: The Methodological Puzzles of the Financial Instability Analysis. Annandale-on-Hudson, NY, The Levy Economics Institute of Bard College.

VERCELLI, A. (2009b) A Perspective on Minsky Moments: The Core of the Financial Instability Hypothesis in Light of the Subprime Crisis Annandale-on-Hudson, NY, The Levy Economics Institute of Bard College.

WHALEN, J. C. (2008) Understanding the Credit Crunch as a Minsky Moment. *Challenge* 51**,** 91-109.

WHALEN, J. C. (2009) A Minsky Perspective on the Global Recession. IN TAVASCI, D. & TOPOROWSKI, J. (Eds.) *Minsky, Financial Development, and Crises.* Palgrave.

WOLF, M. (2007) In a World of Over-confidence, Fear Makes its Welcome Return. *Financial Times.*

WOLF, M. (2008) Keynes Offers Us the Best Way to think about the Financial Crisis. *Financial Crisis.*

WRAY, L. R. (1998) *Understanding Modern Money: The Key to Full Employment and Price Stability,* Chettenham, UK, Edward Elgar.

WRAY, L. R. (2009) The rise and fall of money manager capitalism: a Minskian approach. *Camb. J. Econ.,* 33**,** 807-828.

WRAY, L. R. & TYMOIGNE, E. (2008) Macroeconomics Meets Hyman P. Minsky: The Financial Theory of Investment. Annandale-on-Hudson, NY, The Levy Economics Institute of Bard College.

ZEZZA, G. (2008) U.S. Growth, the Housing Market, and the Distribution of Income. *Journal of Post Keynesian Economics,* 30**,** 375-401.

ZEZZA, G. & DOS SANTOS, C. H. (2004) The role of monetary policy in post-Keynesian stock-flow consistent macroeconomics growth models. IN LAVOIE, M. S., M. (Ed.) *Central Banking in the Modern World: Aletrnative Perspectives.* Cheltebham, Edward Elger.