# CENTRAL BANKS AND FRACTIONAL RESERVE BANKING: MONEY CREATION OUT OF NOTHING?

**Jannie Rossouw, Vishnu Padayachee and Bradley Bordiss**
School of Economic and Business Sciences
University of the Witwatersrand
Vishnu.padayachee@wits.ac.za

## ABSTRACT

The view is often held that central banks have little or no connection to the society within which they exist, although their policy decisions impact directly on people, institutions and society. While this view has gained much attention in the media and in some academic circles, this article uses evidence from South Africa to show the fallacy of the view that 'money is created out of nothing' and that central banks are owned by and secretly controlled for the benefit of particular interest groups. Instead, it draws on insights in post-Keynesianism to demonstrate that the ownership of the South African Reserve Bank rests in the hands of private shareholders, but in an open and transparent manner, and that the Reserve Bank succeeds in ensuring that the system is supervised and sufficiently regulated in the public interest.

**Keywords:** central banks, South African Reserve Bank

## INTRODUCTION

The view is often held that central banks have little or no connection to the society within which they exist, although their policy decisions impact directly on people, institutions and society. This view is popular in both left- and right-wing circles. Some progressive trade unions in South Africa, such as the National Union of Metalworkers (NUMSA) have argued a case to nationalise commercial banks and the privately

African Review of Economics and Finance
Volume 7 | Number 2 | 2015
pp. 105–131

Print ISSN 2042-1478 | Online ISSN 2410-4906
© The author(s) and
African Finance and Economics Consult

owned South African Reserve Bank (SARB) on the basis that, as constituted, they do not serve the interests of workers and the poor (*Mail & Guardian*, May 22, 2012; Padayachee, 2013). Such views tend to be polemical and hence require more careful analysis. By drawing systematically and widely on post-Keynesian ideas, this article highlights the fallacy of theories that purport to show that 'money is created out of nothing' in the private interests of secret and shadowy shareholders.

Specifically, the discussion of the fractional reserve banking system shows that banks act as intermediaries between depositors (the main providers of the liabilities of banks) and borrowers (the loans of these borrowers are the main assets of banks) (see, e.g., Mishkin, 2004; Van der Merwe & Mollenze 2010), or retailers of credit, as Basil Moore (1988) would have it.

The discussion of central banks in this article focuses on their institutional structures rather than on their functions, which can include any number or all of the following (see, e.g., Bain & Howells, 2003; Wetterberg, 2009): issuance of banknotes; issuance of coins; formulation of monetary policy; implementation of monetary policy; bank regulation and supervision; administration of exchange controls; banker of the government; economic analysis; management of gold and foreign exchange reserves; provision of liquidity to the banking system; and lender of last resort (emergency liquidity) assistance to banks in distress. Central banks are engaged in continuous attempts to improve communication with their stakeholders (see, e.g., Blinder, [S.a.]; Rossouw, 2008; Rossouw & Powers, 2005), but are nevertheless often thought of as remote institutions operating from inaccessible glass towers with little or no connection to the society within which they exist. However, two interrelated issues have recently become matters of a broader debate – if not among all people, then certainly among somewhat broader civil society, both globally and in South Africa. One relates to the issue of fractional reserve banking (is this an instance of fraud being perpetuated by central banks at the expense of ordinary people?) and the second question is about central bank ownership (who really owns central banks?). The latter issue about the ownership of central banks is worth discussing (again) because it has recently generated a degree of populist concern in both left- and right-wing circles, and is a novel feature of the South African financial system. (*Mail & Guardian*, May 22, 2012; Padayachee, 2013).

Research on the banking sector in South Africa has tended to focus on commercial banks (Mabwe & Webb, 2010), while global literature has focused on other important issues such as the money market (see, e.g., Faure, 2012).

The contribution which we hope to make here is one of engaging with the ideas of extreme popularist anti-central banking groups who would not usually be found in the forums of academic journals. However these 'conspiracy' groups nevertheless exercise some power on the public's imagination. Some might say that it is not necessary to concern oneself with these marginal voices, but the tasks of central banks are too important to just nonchalantly ignore attacks on the very existence of

these crucial economic institutions. We hope to show that there are great debates – from orthodox/inflation-targeting contributions, to heterodox/ post-Keynesian ones – which, while rigorously critical of different aspects of policy, all accept the crucial role that central banks play in modern economies.

Extreme populist concerns often display an ignorance of the workings of a fractional reserve system. This article fills that gap, as we seek to dispel this misunderstanding. We proceed to set out the main intellectual currents (both historical and modern) of orthodox, Keynesian and post-Keynesian views on how money is created in an economy. Next we analyse the logic of the fractional reserve system, before dealing with the important lender-of-last-resort function of central banks. Finally we assess and make recommendations about whether private control of the South African central bank is mitigated by adequate governance controls to ensure that it acts in the public interest. In our view, the SARB succeeds in ensuring that the system is sufficiently regulated in the public interest.

While this paper focuses on the South African case, it also has value far beyond our borders.

## THE FINANCIAL CRISIS AND THE RISE OF RIGHT-WING POPULISM

It is perhaps no coincidence that during and in the aftermath of the global financial crisis (2007–2009), there has been a noticeable rise in the popularity, confidence and stridency of those who maintain that fractional reserve banking is a trick, a sleight of hand, perpetuated by central bankers to make more money and profits out of thin air for the 'Rothschilds' and other powerful (Jewish) families who, it is asserted, are the real private owners of the shares of central banks and who also control, either directly or indirectly, the international banking system (see, e.g., Fourwinds.10, S.a.; Godlike Productions, S.a.; Motiar, 2013; Secrets of the Fed.com, S.a.; Tellinger, S.a.). The implications of the position held by these right-wing populist theorists are clear: it is these shadowy 'Jewish bankers' who are to blame for this and every other crisis that has destabilised the world of finance and banking throughout history (see, e.g., European Independant[1] [sic] Media Centre, S.a.).

From an orthodox, 'prudent finance' point of view, Choudary has argued in his recent book *The principles of banking*, that the real culprits of the recent crisis are in fact to be found elsewhere, in the form of those investment brokers and fund managers within the banking and financial system who made huge sums of money in the bull market that preceded the crash:

> Come the crash, they were shown to be naked. These people, through a combination of hubris, arrogance, conceit, perverse empire-building obsession, greed, herd mentality, monstrous

1 Note that the name of this institution is misspelt on its own website.

> egotism, poor understanding of finance, simple ineptitude, and a lack of the appreciation of the basic principles of banking, inadvertently conspired to bring about the worst banking crisis since the Great Depression, if not of all time.(Choudary, 2012, p. xviii)

A heterodox, Post-Keynesian perspective is advanced by Hyman Minsky, who lays the blame on policy which followed the opposite direction to that recommended by John Maynard Keynes in Chapter 24 of the *General theory of employment, interest and money* (1936). There, Keynes called for a decrease in capital share of total income and for socialisation of investment by driving down the interest rate, eliminating the scarcity of capital and achieving full employment. Instead, the neoclassical synthesis promoted private investment.

> Rather than reducing inequality, public policy actually promoted it. Rather than achieving full employment through job creation, policy offered welfare and social security to remove people from the labour force. As Minsky argued from the late 1950s, this combination of policies would inevitably promote inflation, rising inequality, and financial fragility. (Minsky, 1975, p. xiii)

In *Stabilising an unstable economy* (1986), Minsky shows how the banking system is the Achilles' heel of instability in the modern capitalist economy. But, rather than proposing its elimination, Minsky argues for a greater role for state/public investment in the economy to support job-creation and the rigorous regulation of the banking sector. In emphasising the government's function of 'employer of last resort' (Vasconcelos, 2014, p. 29), albeit at relatively low wages, Minsky, following Keynes in Chapter 23 of *General theory*, harks back to the mercantilist idea that a nation is strong and healthy when its population is fully employed (Mun, 1664, p. 76).

In South Africa, the most articulate and visible exponent of this banking conspiracy is Michael Tellinger, whose book *Ubuntu contributions: A blueprint for human prosperity* has received publicity on radio talk shows and other news sources. Another proponent of these views is Stephen Mitford Goodson, former non-executive director of the SARB, whose book on the bank has recently been published (2014). Goodson, who was number two on the Ubuntu Parliamentary Election list in the 2014 national elections (after his leader, Mr Tellinger) follows the notorious Holocaust denier, David Irving, in labelling key figures in history as 'Jews'. Thus Goodson repeats Irving's allegation that Henry Strakosch, monetary policy advisor to the Jan Smuts government, was a 'Jewish banker and financier' who 'paid Winston Churchill's debts in exchange for Churchill spearheading international Jewry's campaign that sought a war with Germany, and the destruction of National Socialism's usury-free banking system' (Goodson, 2014, p. 30). While Strakosch may have had family who, in their distant past, may have been Jewish, there is no evidence that Strakosch was ever a practising Jew (Butz, 2002).

It would appear that conspiracy theories directed against so-called Jewish bankers and the modern banking system have a long history in South Africa (see Kruger, S.a., or the reference below to 'Hoggenheimer'). Goodson (2014, p. 14) suggests that Dr Jack Holloway supported his group's outlandish positions on the banking system, quoting from a letter published in a secondary source by a certain Ivor Benson (1907–1993), described by Wikipedia as 'a journalist, essayist and notorious anti-Semitic conspiracy theorist'. Jack Holloway was South African Secretary of Finance (1937–1950) and South African High Commissioner to London. He was also one of the chief South African delegates to the Bretton Woods conference and, as forthcoming doctoral research by Bradley Bordiss will show, a leading creator of the global financial architecture established in Bretton Woods in 1945. Holloway was a strong advocate of 'sound money' and a proponent of the Gold Standard. But we have found direct documentary evidence to refute Goodson's contention.

In 1973, Benson sent Holloway a paper entitled 'The truth about inflation' in which his conspiracy theories are laid out ('Archive for Contemporary Affairs'). However, Benson's hope of support was shattered by Holloway's dismissive response. Holloway promptly returned the paper and made the following comments on it in his reply to Benson – comments which strongly echo the substance of the response we have made to the latest cohort of conspiracy theorists who attacked a short, popular version of this paper published in *Business Day* (June 24, 2014). Holloway responds to Benson as follows:

> The paper suffers from the same disability as amateur efforts generally, inasmuch as it tries to deal with the complicated issues of a subject without adequate knowledge of the rudimentaries…. I do not see much use in making a general attack on 'the bankers' … and come to the conclusion '(t)hat means we have to get rid of the bankers regime or in other words, their monopoly of control of money creation'. …. I do not see how the paper can bring much enlightenment to the general public…. ('Archive for Contemporary Affairs', emphasis in the original)

This response, drafted more than 40 years ago, by someone with an orthodox view on money and banking, is still a fit response to the contemporary claims of Messrs Tellinger, Goodson and their fellow travellers.

A number of issues arise from these right-wing contentions that we aim to address here. One is about fractional reserve banking itself, how it works and in whose interest. Second is a thinly veiled anti-Semitic onslaught which has its own long history within the genre of conspiracy theories both globally and in South Africa. In this regard the cartoon figure of 'Hoggenheimer', a rich capitalist caricature created by Afrikaner cartoonist D.C. Boonzaaier, comes to mind. The assertion is that a shadowy group of Jewish bankers and money-lenders controls the global financial institutions (the IMF, central banks, the US Treasury and the Federal Reserve) and through that mechanism manipulate global economics and politics in their own private interests. Third is a widely held view that most (if not all) central banks are

owned by the self-same Jewish bankers, and that this ownership is used to control the world banking system.

In this intervention we wish directly to challenge the first and third of these issues, and indirectly, also the second. Our aim is to demonstrate as simply as we can (given that it is a highly technical issue in central banking) how fractional banking works. Second, we show that in fact since the 1930s, most central banks which were indeed originally owned by private shareholders, have been taken over by their respective governments, leaving only a handful in private hands (including in South Africa).

## INTELLECTUAL CURRENTS

Support for the establishment of a state bank to replace the central bank is often raised internationally and also in South Africa, where the replacement of the SARB by a 'people's bank' or 'state bank' is advocated by certain commentators. Tellinger, the leader of the Ubuntu[2] Party, alleges that '(b)oth the ruling party (the African National Congress) and DA (the Democratic Alliance, the official opposition) are completely under the control of the South African Reserve Bank'[3] (Hampton, 2014) and that the SARB is controlled from Switzerland (Ubuntu Liberation Movement, S.a.).

The envisaged state bank will create money free of debt and interest (Ubuntu Liberation Movement, S.a.). However, it is not clear from available documentation exactly how such money will be created and distributed. It is stated that the Ubuntu Party will, on assumption of political control of South Africa, ensure that

- parliament will have the sole and exclusive power to create any form of money – physical or electronic – free of debt and interest;[4]
- the power to create the nation's money supply will vest in a Monetary Trusteeship, consisting of seven to eleven independent persons, who are appointed by and solely responsible to Parliament;
- the Monetary Trusteeship will meet at least once a month and will have at its disposal the full cooperation of the Minister of Finance, the Treasury and the People's or State Bank of South Africa;

2 Ubuntu (/uːˈbʊntu) is an indigenous Nguni term which means, when translated literally, humanness. It can be described with a meaning of human kindness, implying humanity towards others or a universal bond of sharing that connects all humanity.

3 Challenging the somewhat surprising assertion that a central bank has power of control over both the governing party and the official opposition in a country is beyond the scope of this article.

4 It is not explained how money will be 'created free of debt and interest', or what exactly is meant with this choice of words.

- new money will be paid into the economy by the Treasury and withdrawn, when necessary, in order to maintain a stable price level by means of temporary taxation;[5]
- the statutory requirement that all commercial banks and other lending institutions hold at all- time 100% reserves. (Ubuntu Liberation Movement, S.a.)

The truth is much more nuanced. First, the real debate about banking is not one between crude 'pro-bank' and 'anti-bank' brigades, as suggested by Tellinger, or between those in favour of fractional reserve banking and those supporting Tellinger and the Ubuntu Party's model of state banking and 100 per cent reserves for commercial banks. The two main intellectual currents to the banking debate are between an orthodox school which sees money supply as being determined exogenously by the actions of the monetary authority, and a post-Keynesian approach which argues that money is created endogenously within the banking system, as it responds to demand for credit (see, e.g., Goodhart, 1984; Moore, 1988; Rochon & Rossi, 2013).

We now proceed to set out the main lines of argument of each of these traditions, and end by showing that neither of these approaches can support the view that 'money is created out of nothing'. Fractional reserve banking implies that commercial banks take on deposit surplus funds (savings) from the public. A certain percentage of such deposits is placed as prescribed reserves with the central bank, with the balance being used to make loans to the public. We show that there are essentially two traditions of monetary policy thought – an orthodox one that argues for sound money; and an alternative, heterodox tradition (mostly post-Keynesian) that emphasises the importance of maintaining the stability of the banking system and ensuring that it serves the needs of the real economy. Within this post-Keynesian tradition, there is much concern for speculative activity, and a general trend towards instability within the banking sector, but these concerns result in calls for more rigorously active oversight by central banks, not their abolition. The important point is that, regardless of whether one takes an orthodox or a post-Keynesian/heterodox position, albeit with concerns about speculation, loans are not created out of nothing. Both traditions are rich with arguments in favour of monetary authorities, which came to be represented by central banks, albeit with some differences mainly linked to the question of central bank independence and the value of inflation targeting.

We show that ownership of these institutions differs across the world. The main difference is between central banks which are wholly owned by their respective governments and those wholly owned by private shareholders (or some combination thereof), with the SARB as one of a very small group of central banks in the latter group. However, the important point is that central banks invariably have to function in the public interest and they disclose their affairs to the public irrespective of their ownership structure. A system of financial reporting with published accounts ensures

5 'Temporary taxation' is not explained, but presumably it is a temporary tax surcharge.

that there is no scope for 'shadowy' control over central banks for the benefit of any particular interest group.

## The orthodox/sound money tradition

David Hume (1711–1776) may be considered the father of the tradition concerning itself with preserving a steady value for money, as a prerequisite for an economy in equilibrium. In his essay 'Of the balance of trade' (1752), Hume developed his famous specie flow mechanism in which the increase in the money supply caused by the importation of gold would cause prices to rise, resulting in a loss of competitiveness of a country's producers. In his essay 'Of money' (1752), Hume takes a position closer to that of John Maynard Keynes in *The tract on monetary reform* (1923), in admitting a short-run boost to consumption caused by an increase in money supply, but he goes on to emphasise that this is not true in the long run.

From 1797 until about 1875, the debate on controlling the issuing of notes and credit by British banks produced a very fruitful literature. David Ricardo was one of the leading participants in the debate on the side of sound money, and tying banks down to the discipline of either a gold standard or a gold exchange standard (Fetter, 1965, pp. 42–43, 103–105). It is no accident that the world had to wait for the turbulence of this earlier period to end, and a new era of financial stability to come, with a powerful Bank of England at the helm, for the 'Golden Age' of the quantity theory of money to be born in the 1870s. This period lasted until the outbreak of the First World War in 1914 (Laidler, 1991). In this period, Irving Fisher developed his famous quantity theory of money, set out in *The purchasing power of money* (1911). This became summarised in the famous equation:

$$MV = PT \qquad (1)$$

where M is the total stock of money, P is the price level, T is the number of transactions carried out and V is the velocity of the circulation of money. This equation is in fact a truism admitted by both sides of the monetary policy debate, with quantity theorists focusing on how an increase in money supply (M) translates to an increase in prices (P). Milton Friedman, in resurrecting the importance of a stable money supply, tasked the central banks with controlling money supply, in order for markets to allocate resources efficiently. In his monumental work with Anna Schwartz he emphasised how, in analysing historic monetary data, an increase in money supply led to an increase in inflation, and also set out to prove that an increase in inflation had an adverse effect on economic growth (Friedman, 1969).

Thomas Palley (2014, np) succinctly summarises the Friedman position and contrasts it with post-Keynesianism as follows: 'The cornerstone of monetarism is that central banks control the money supply, thereby rendering the money supply subject

to tight exogenous control. Post-Keynesians sought to demolish that cornerstone by arguing the money supply is endogenously determined by bank lending.'

Friedman's intellectual heirs, the new classical macroeconomists including Kydland and Prescott, as well as Barro and Gordon, developed these ideas further, most importantly in the notion of dynamic time inconsistency. For the new classical economists it was not some Jewish bankers who posed the greatest risk to sound money and price stability, but rather the intentions and actions of governments, who, they argued, were predisposed to interference in monetary policy through the manipulation of interest rates for short-term political purposes. Better therefore that central banks be made totally independent of governments (see Snowden *et al*., 2002, pp. 211–213, for a summary of these arguments). The influence of this intellectual trajectory and the election of conservative governments in both the US and the UK in the 1980s resulted in a wave of central banks throughout the world being granted full independence in the decade that followed, and consequentially for inflation targeting becoming a popular monetary policy regime throughout the world, including in South Africa. The South African constitution's mandate to the SARB, namely that of maintaining price stability, comes from this intellectual tradition.

## The heterodox and post-Keynesian tradition

For the sake of simplicity and brevity, let us combine the concerns for banking stability and that which wants to ensure that the money supply is sufficient for the needs of the real economy into this sub-section. We can start the history of this line of thought with the little-known Secretary of the British Treasury, William Lowndes. By the 1690s, pound sterling was over-valued and, as a result, it was disappearing from circulation, leaving the British economy short of money. Lowndes viewed money (in this case the pound) as a social convention, to be devalued to suit the needs of the real economy. This he proposed to do by lessening the silver content of the pound. John Locke opposed him, the views of the thinkers of the previous section prevailed, and money supply remained critically short (Martin, 2013, pp. 122–129).

In the period of the great monetary debates in Britain (1797–1875), Henry Thornton initially defended the extension of money supply by the banking system in his great work *An enquiry into the nature and effects of the paper credit of Great Britain* (1802). That said, Thornton later came to take a stricter view of money creation, believing that the Bank of England should maintain a closer rule-based connection between money and gold. No doubt it was this later stand that enamoured him to Friedrich von Hayek, who wrote a masterful introduction to the 1938 reprint of Thornton's work. The process of money creation in the banking system which Thornton wrestled with in *Paper credit* (1802) was developed by Knut Wicksell in *Interest and prices* (1898). Wicksell developed the idea of a real rate of interest, sometimes different from the market rate: if the real rate is greater than the market

rate, producers will borrow to expand production until the gap between these two rates are closed. Those in this sub-sections paradigm, including Keynes, Minsky and Moore, became aware of the endogenous nature of money supply in the banking system, as a result of this mechanism. Friedman and others whose monetary thought fit into the previous sub-section, emphasised the importance of ensuring that the natural rate of return on capital sets the interest rate.

From his first book, *Indian currency and finance* (*ICF*) (1913), Keynes was aware of the importance of a varying money supply to meet the needs of the real economy. In *ICF*, Keynes sets out his ideas on the nature of the banking system: that it is both an instrument of progress and support to the real economy and inherently unstable; both a force for good, and one for potential harm. Hence the need for central banks – something Keynes was a champion of from this early stage of a glittering career. With proper regulation, banks can be encouraged to provide expanding and contracting money supply as the economy requires it, more at times of planting, and less at times of harvesting, as he prescribed for the agricultural Indian economy (Keynes, 1913, pp. 61–62). This tool, plus money leaving the 'barbaric' hiding place as gold under the mattress and being employed usefully in a 'civilised' banking system, discouraged hoarding and was a force for good. But Keynes also recognised the banking system's power for evil. Predating Minsky's famous observation that stability creates instability, Keynes (1913, pp. 208–209) observed about the then current stability and prosperity of the Indian banking system: 'If the present spell of prosperity lasts too long, she will no doubt lose it.' He quotes from an Indian Chamber of Commerce report that

> new banks are springing up with alarming rapidity… The fear is that if one of these mushroom growths fail, others will follow, and the timid depositor, unable to discriminate between the sound and the unsound concerns, will make haste to get his money back from whatever bank it is in, and his confidence in banking institutions thus rudely checked will take years to win back. (Keynes, 1913, p. 231)

It was common in times of expansion and exuberance for speculation to increase in volume: 'Speculators may do no harm as bubbles on a steady stream of enterprise', but as Keynes (1936, p. 159) noted in *General theory*, the position is serious 'when enterprises become the bubble on a whirlpool of speculation'. But although *General Theory* presents a holistic vision, in one important respect it was inferior to the *Treatise on Money* which provided a much better 'institutionally detailed analysis of money and financial markets' (Minsky, 1975, p. xiii). Minsky sets himself the task to bring investment finance back into Keynes' analysis.

In his great interpretation entitled *John Maynard Keynes* (1975), Minsky draws on chapter 24 of *General theory*, which called for a decrease in capital share of total income and for socialisation of investment by driving down the interest rate, eliminating the scarcity of capital and achieving full employment. He was very critical of the neoclassical synthesis that had dominated the interpretation of Keynes

up until then: ‘Rather than reducing inequality, public policy actually promoted it. Rather than achieving full employment through job creation, policy offered welfare and social security to remove people from the labour force’. As Minsky (1975, p. xiii) argued from the late 1950s, ‘this combination of policies would inevitably promote inflation, rising inequality, and financial fragility’.

Daniel de Santana Vasconcelos (2014) resurrects this much neglected recommendation of Minsky, namely that efforts at assisting the poor should, for the sake of all society, be in the form of employment creation in productive industry, rather than by way of welfare payments. In true Minsky style, this clarity of thought, counter to the dominant narrative, is an intellectual inheritance from his mentor, Keynes, who advocated employment creation, famously with his ditch-digging example (Keynes, 1936, p. 129), and resurrected interest in the Mercantilists, who also did so (Keynes, 1936, pp. 333–371).

While the anti-banking groups tend not to deal with broader aspects of economic theory not connected to banking, the point worth raising here is that the great thinkers on banking policy, from Hayek to Keynes and Minsky, conceived of their ideas not in isolation, but rather as part of a broader vision of the economy. In the case of Minsky, this vision included looking past the consumer-focused thinking originating with Adam Smith, to the production-focused paradigm of the Mercantilists before him. In 1664, in a book published by his son, the Mercantilist Thomas Mun (1664, p. 76, emphasis added) observes in respect of Dutch success that ‘it is not the place, but the *employment*, not the barren Netherlands, but the rich fishing, which gives foundation, trade and sustenance to those multitudes of ships, arts and people’. Vasconcelos (2014, p. 24) examines Minsky’s praise of ‘big government’, noting that Minsky thought taxation should be between 20 per cent and 50 per cent of GDP; that care must be taken to maintain the efficiency and the effectiveness of the tax system (2014, p. 28); and that, through employment creation in productive industry, government must act as an ‘employer of last resort’ (2014, p. 29).

> Social justice and individual liberty demand interventions to create an economy of opportunity in which everyone, except the severely handicapped, earns his or her way through the exchange of income for work. *Full employment is a social as well as an economic good.* (Minsky, 2008[1986], p. 7, emphasis added, in Vasconcelos, 2014, p. 25)

This focus, away from welfare payments and towards employment creation, surely has something to say about South Africa. ‘Only if there are more jobs than available workers over a broad spectrum of occupations and locations can we hope to make a dent on poverty by way of income from employment (Minsky, 1965, p. 175, in Vasconcelos, 2014, p. 33).

If government investment is at least of the same magnitude as investment by the private banking sector, then counter-cyclical expansion by government investment can stabilise a contraction by this sector (Vasconcelos, 2014, p. 36). Minsky takes

this socialisation of a large portion of investment seriously, as a twin to the policy of merely rescuing private investment institutions when they get into trouble, noting that if only private institutions exist, merely rescuing them means that 'the stability that this will cause, even if it is the result of policy, is destabilising' (Minsky, 1975, p. 11).

Minsky goes on to show how a combination of the valuation of investments, the expected cash-flow from businesses and interest rates, conspire to create an expansive period in demand for credit, and the upward movement of asset prices until a tipping point is reached, triggering a 'recursive debt-income deflationary process' (Minsky, 1975, p. 113). Echoing Keynes' (1936) liquidity trap, Minsky (1975, p. 113) warns that 'even if the interest rate on financial assets continues to fall as the supply of money is increased, the capitalisation rate applied to investment assets may not rise by enough to induce investment'

Having dealt with borrower and lender decisions in *John Maynard Keynes* (1975), Minsky turns his attention primarily to financial institutions and their lending decisions in *Stabilizing an unstable economy* (1986), in which the destabilising effect of financing speculation is dealt with. Minsky identifies three possible sets of relationships between incoming revenue and debt liabilities which describe progressive 'financial fragility':

- Hedge finance where anticipated revenues exceed running costs and debt and interest payments;
- Speculative finance where the borrowers can meet their interest payments but can only repay the principle if the asset price rises; and
- Ponzi finance where projected earnings cannot possibly meet obligations neither for debt nor full interest payments.

Minsky (1992, p. 7) argues that 'if hedge financing dominates, then the economy may well be an equilibrium-seeking and containing system. In contrast, the greater the weight of speculative and Ponzi financing, the greater the likelihood that the economy is a deviation amplifying system'. But he also argues that 'over periods of prolonged prosperity, the economy transits from financial relations that make for a stable system to financial relations that make for an unstable system' (Minsky, 1992, p. 8).

Even if Minsky's pessimistic analysis appears to resonate with the anti-fractional banking groups, this similarity evaporates when we consider his prescriptions. Rather than a state bank to fund private endeavour, Minsky proposes state investment. Rather than a world without fractional reserve banking, Minsky proposes strict regulation of the banking system.

In support of this position, Minsky (1986) points out that US Federal Government spending in the period from the mid-1930s until the 1970s increased from 14.3 per cent of GDP in 1950 to 23.8 per cent in 1975 alone (Minsky, 1986, p. 27). 'Big

Government was one cause of the halt in the sharp decline of the economy' in the 1974–1975 recession (Minsky, 1986, p. 23). 'The existence of a large and increasing government debt thus acted as a significant stabilizer of portfolios during the threatening period of 1975' (Minsky, 1986, p. 41). Hardly comfort for our supporters of Ron Paul, who want to abolish the US Federal Reserve System (Paul, 2009).

Another great Post-Keynesian, Moore, was the leading figure in the development of the idea that money supply was endogenously created, and that money was essentially demand determined and credit driven (Padayachee & Bordiss, 2013). In a recent paper, Steve Keen (2014) takes the work of Moore further by showing the strong correlation between employment and debt levels, thus highlighting the challenge of debt de-leverage. Another branch of this tradition emphasises that the central bank has a responsibility for maximising employment, as set out in the dual mandate of the US Federal Reserve, and as argued by Robert Pollin, Gerald Epstein, James Heintz and Léonce Ndikumana in *An employment-targeted economic program for South Africa* (2007). (For more on this theme of growth, employment and redistribution in South Africa, see Lanscombe, 2014.)

The point that needs to be stressed for our purposes here is that even in the paradigm of an endogenous money supply, created within the banking system, money is not 'created out of nothing', at best it comes into being as a result of increased demand from an expanding real economy; at worst as a result of speculative demand, which central banks have a duty to rigorously regulate. Either way, it is hardly the sleight of hand of the Elders of the Protocol of Zion!

Whether he realises it or not, Tellinger's main intellectual influence in banking theory (arguably) lies in the later work of Friedrich von Hayek. However, while Von Hayek (1976) was in favour of the abolition of central banks, there is no evidence in his work – even his later more strident writing against central banks – that he ever held a view that central banks were part of some conspiracy to defraud the public in favour of the private interests of the few.

Calomiris and Haber (2014) recently published a summary of banking systems, particularly those in the US, Canada, Mexico and Brazil. They point out that since 1840 the US has had 11 systemic banking crises, with devastating effects on the real economy. In addition, in America some populist movements and political parties agitating for (what most mainstream thinkers would characterise as) 'reckless' banking have combined with an aggressive banking lobby propagating, among others, considerable deregulation, to produce a disastrous cocktail with devastating effects on the real economy. By contrast stands Canada, a country which takes its banking regulation very seriously. Canada avoided deregulation of its banks, but rather subjects these institutions to a rigorous regulatory framework. The Canadian banking lobby was also relatively unsuccessful in influencing the legislature to deregulate their banking system. Not surprisingly, then, Canada has had no systemic banking crises since 1840. Calomiris and Haber (2014) point out that South Africa is

one of those few fortunate countries which have, to date, enjoyed rigorous banking regulation and an absence of populist clamour by people not qualified to run a banking system. We would point out that, since the SARB was established in 1921, South Africa has had no systemic banking crises.

## HOW FRACTIONAL RESERVE BANKING WORKS

'The provision of bank loans that are not fully backed by precious metals or deposits', is how fractional reserve banking is defined in one South African banking text (see Van der Merwe *et al*., 2014, p. 366). Eyler (2010, p. 66) notes that most central banks use fractional reserve banking, requiring their depository institutions to hold a certain amount of deposits from lending in any form; and '[i]n a fractional reserve system, private banks are required to hold a certain amount of their deposits as non-loanable funds' (2010, p. 108).

In short, the principle of fractional reserve banking implies that commercial banks take on deposit surplus funds from the public, i.e., individuals and businesses that wish to save. A certain percentage of such deposits are placed as prescribed reserves with the central bank. The current reserve ratio in South Africa is 7.5 per cent. Banks can use the balance of deposits above the reserve ratio to make loans to the public.

The important point is that loans are not created out of nothing, but are funded by the deposits received by banks. It is for this reason that banks run into financial difficulty, particularly when deposits are withdrawn. We accept (as post-Keynesians would insist) that in our modern, sophisticated banking system it is indeed possible that a bank can issue a loan or extend credit and then go into the market and source funding from another bank with excess capital or even via securitisation. But we maintain that in the main the banking system works along the lines set out below.

Banks normally attract deposits for a shorter term that the term of their loans and advances to the public. Banks typically fund 20-year mortgage bonds with 6- and 12-month deposits, simply because the public normally do not want to commit funds for longer periods. Likewise, business borrowing for investment purposes requires longer-term advances funded by short-term deposits. Savers are reluctant to commit their saved capital for periods typically required by borrowers in their quest to finance their investments.

When deposits are withdrawn from a particular bank and such a bank cannot replace withdrawn deposits with new deposits, the bank will suffer a liquidity crisis, as its advances are committed for longer terms (see below). However, here is no sense of a bank creating loans and advances out of 'nothing'. If it were indeed true that a bank could create loans and advances out of thin air, no bank would ever run into financial difficulty. The 2007–2008 international banking crisis would simply not

have occurred, as banks would have managed themselves out of financial difficulty by creating loans 'out of nothing', if they had the power to do that.

Let us illustrate this basic principle with an example: when banks receive deposits, they increase their prescribed reserve holdings with the central bank, while the balance of deposits above the prescribed reserve ratio can be used to increase loans and advances to the public. Van der Merwe and Mollentze (2010, p. 51) describe the holding of prescribed reserves as a constraint on the ability of banks to make loans and advances.

The simple multiplier used to calculate the total increase in loans and advances resulting from a deposit with a bank, assuming a prescribed reserve ratio of 10 per cent of each amount deposited, owing to the pay-out of loans and advances (see, e.g., Van der Merwe & Mollentze, 2010, p. 52) is given by the formula:

$$\Delta m = 1/r \qquad (2)$$

where

$\Delta m$ = change in total deposit expansion in the banking sector

r = prescribed reserve ratio

An initial increase of US$100 million in bank deposits will, in this example, therefore lead to a total increase of US$1 000 million in deposits as a liability of banks, with corresponding assets comprising prescribed reserves of US$100 million and loans and advances amounting to US$900 million.[6] It is stressed that this is the *simple* multiplier.

In practice the multiplier process is more complicated, as the proceeds of all loans and advances are not immediately and automatically re-deposited in full at commercial banks, as is assumed in the simple multiplier model. This can be described as 'leakages' from the system. Mishkin (2004, p. 377; see also Van der Merwe & Mollenze, 2010, p. 52) explains that the prescribed reserve ratio, excess reserves held by banks (cash in excess of the prescribed reserve ratio not used for

6 The principle is that the initial deposit of US$100 million will result in an increase of US$10 million in prescribed reserves in this example, and loans and advances of US$90 million. The US$90 million in loans and advances are assumed to be deposited in full with a bank, resulting in an increase of US$9 million prescribed reserves and US$81 million in loans and advances. This continues to a total increase of US$1 000 million in deposits as a liability of banks, with corresponding assets comprising of prescribed reserves of US$100 million and loans and advances amounting to US$900 million.

loans or advances[7]) and changes in currency (banknotes and coin) in circulation will impact on the ability of banks to make new loans and advances from deposit inflows (an increase in banking liabilities). The total value of loans and advances from an additional deposit (see, e.g., Mishkin, 2004, p. 377) can be calculated as follows:

$$\Delta m = \frac{1 + \Delta c}{r + \Delta e + \Delta c} \qquad (3)$$

where

$\Delta m$ = change in total deposit expansion in the banking sector

$\Delta c$ = change in currency in circulation

r= prescribed reserve ratio

$\Delta e$ = change in excess reserves held by the banking sector

If the reserve ratio is 10 per cent as in the previous example, the increase in currency holdings by the public is 5 per cent and the change in excess reserves is 0.1 per cent, an initial deposit of US$100 million will result in a total increase of US$250 million in deposits as liabilities of banks, which is considerably smaller than the amount of US$1 000 million shown above. However, if $\Delta c$ and $\Delta e$ in Equation (3) are equal to zero, the result will be the same as in the case of Equation (2), the simple deposit multiplier.

This implies that larger prescribed reserve holdings and larger holdings of excess reserves and/or currency will result in a smaller expansion of assets and liabilities of banks. Naturally, if the bank receiving the initial deposit of US$100 million elects to hold the total amount of US$90 million in excess reserves, there will be no multiplier.

In the example in Equation (3) where the increase in currency holdings by the public is 5 per cent and the increase in excess reserves is 0.1 per cent, the total liabilities of banks will increase by US$250 million, comprising as assets banks' prescribed reserves of US$25 million, excess reserves of US$0,25 million and loans and advances of US$224,75 million, while the increase in currency holdings by the public is not shown on the balance sheet of the banking system, but only on the balance sheet of the central bank as an increased liability.

In addition, banks do not only receive deposits, but also face withdrawals. Withdrawals result in de-multiplying, i.e., the ability of banks to advance funds is

7 Van der Merwe and Mollenze (2010, p. 52) explain that this reserve holding by banks in excess of prescribed reserves can be the result of any one or a combination of a lack of demand for loans and advances, insufficient capital base of banks to support the risks associated with further loans and advances and/or banks deciding to increase their holding of excess reserves. The latter can, for example, be held in expectation of future cash withdrawals.

reduced. The net result of deposits, withdrawals and leakages (changes in prescribed reserve holdings, holding of excess reserves and/or holding of currency by the public) determines the ability of banks to make new loans and advances, or the degree in which they have to recall loans and advances to meet the demand for the repayment of deposits.

## LENDER OF LAST RESORT[8]

A unique relationship exists between central banks and commercial banks in their jurisdiction in respect of the lender-of-last-resort function of central banks. This function is often referred to as the provision of emergency liquidity by the central bank to commercial banks in distress, as it is an accurate definition of this responsibility, but in this article we use the more conventional, traditional name of this function.

The principle that central banks should assume a lender-of-last-resort function in respect of distressed commercial banks in their jurisdiction finds its roots in *Bagehot's dictum* (Tucker, 2009, p. 5). Walter Bagehot (1826–1877) postulated that central banks should lend freely during a period of financial crisis to solvent banks suffering liquidity problems to prevent their demise, but only at interest rates that are sufficiently high to dissuade banks not suffering difficulty from borrowing and only against good collateral (Tucker, 2005, p. 5).

In practice this function has evolved into central banks rendering assistance to commercial banks suffering liquidity problems. A typical example is when a commercial bank is faced by large deposit withdrawals (i.e., a loss of liabilities) or a sharp increase in non-performing loans and delinquent borrowers (i.e., an erosion of its asset base). The purpose of this assistance is often the achievement of one, any combination of, or all of the following objectives: To

- allow the distressed bank an opportunity to restructure its balance sheet to restore its liquidity position;
- prevent the illiquidity from developing into a condition of insolvency that will make it illegal for the bank to continue trading;
- prevent a contagion effect of bank runs; and
- facilitate the orderly exit of the distressed bank from the banking system, e.g. by means of a take-over by another bank.

Choudhry (2012, p. 857) describes the availability of lender-of-last-resort assistance to distressed commercial banks as a cornerstone of the banking structure in a country, and in the relationship between central and commercial banks: 'Banks are not like

8 This section draws on a commemorative publication of the SARB (Rossouw, 2011) and on Van der Merwe *et al*. (2014).

other corporate entities. They have an implied social contract with the rest of the economy, which states that in return for a banking licence and the use of lender-of-last resort facilities … they agree to manage their business in such a way that prevents a bank run' (2012, p. 857). Therefore, in the event of a bank run or other events that result in distress at a commercial bank, lender-of-last-resort assistance is available under certain conditions.

The potential systemic importance of a commercial bank in distress affects decisions whether or not to render lender-of-last resort assistance. Choudhry (2012, p. 808) quotes the UK's FSA for a definition of systemic importance, namely 'when its collapse would impair the provision of credit and financial services to the market with significant negative consequences for the real economy'.[9] This is related to the prevention of the contagion effect of bank runs, namely that distrust in the solvency of one banking institution can result in large deposit withdrawals at other commercial banks.

Decisions on lender-of-last-resort assistance are made on a case-by-case basis and cannot be cast in hard-and-fast rules. Aspects taken into consideration are the size of the distressed bank and the potential implications of its failure on financial stability in a country.

The lender-of-last-resort function is compatible with the overall functions of central banks, which are entrusted the responsibility of promoting, supporting and maintaining overall financial stability, over and above their responsibilities for conducting monetary policy (see, e.g., Padayachee, 2014; SARB, 2014, p. i, as discussed below in respect of South Africa on this matter). The absence of lender-of-last-resort assistance to distressed banks will increase financial instability, hence not supporting this objective.

## WHO OWNS CENTRAL BANKS?[10]

The ownership of central banks throughout the world differs. The main difference is between central banks with private shareholders and those owned by their respective governments. The SARB is in the small group of central banks with shareholders, amongst whom are Belgium, Greece, Italy, Japan, South Africa, Switzerland and Turkey, while the 12 Federal Reserve Banks in the US have commercial banks as shareholders.

At the time of the Great Depression (1930–1933) some 75 per cent of the central banks in existence at that time had private shareholders. This practice started changing in 1935 with the nationalisation of the Reserve Bank of New Zealand, in response to the Great Depression. It was part of an approach of 'big government' in that country, when the state accepted responsibility for a wide range of functions in the economy.

9 FSA, Policy Statement 09/16, October 2009.
10 This section draws on Rossouw and Breytenbach, 2011.

The policy view was that government control over the central bank (and therefore over money creation) would expedite poverty alleviation (Rossouw, 2014). One of the unforeseen consequences was that political interference in monetary matters often also ushers in inflation.

In the period running up to and after the Second World War the nationalisation of central banks gained momentum. The central bank of Pakistan, established in 1948, was the only central bank established with shareholders post-World War II; it took over central bank functions for Pakistan from the Reserve Bank of India, which at the time still had shareholders. However, the Reserve Bank of India was nationalised in 1949.[11] The central bank of Pakistan was nationalised in 1974, at the same time as the nationalisation of the central banks in Colombia, Chile, Ecuador, Portugal, Mexico and Venezuela. In 2010, Austria was the last country to date to nationalise its central bank.

The important point to note about the nationalisation of central banks is *nationalisation*: these central banks were nationalised by transferring shares previously held by the general public and legal entities to the governments of the respective countries. The shares were *not* transferred to some unidentified international owners who manage these institutions, to the detriment of the people living in the country. However, this leaves the question of ownership of the remaining central banks with shareholders.

In the case of the 12 Federal Reserve Banks in the US, the shareholding is limited to commercial banks, and is akin to a form of reserve holding imposed on commercial banks. Of the remaining seven central banks, the Bank of Italy is also a special case, as only commercial banks are permitted to hold shares in the central bank. The general public (individuals and businesses other than banks) can hold shares in the remaining six central banks (Belgium, Greece, Japan, South Africa, Switzerland and Turkey) with shareholders (Rossouw, 2014).

The ownership structure of the SARB serves as an example of a central bank that still has private shareholders.[12] It has an issued share capital amounting to R2 million, and the shares are held by some 650 shareholders, comprising individuals and juristic persons. The shareholders' register of the bank is published,[13] where it can be seen that one of the authors of this paper (Rossouw) owns 10 000 shares in the central bank. He is not a Jewish banker!

---

11 Note that the nationalisation of the Reserve Bank of India was at the time not supported by the board of the bank (see, e.g., *Times of India* 1948). The then governor, Sir Chintaman Deshmukh, stated that the board's view was that nationalisation was premature and unnecessary, given the state of India's economic development.

12 See Rossouw (2014) for a full discussion of central banks with shareholders.

13 https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/6212/Shareholder%20Index%20Database%20as%20at%2030%20April%202014.pdf

The shares trade on an over-the-counter market.[14] The last price at which shares traded is R10.50 per share. Shareholders receive annual dividends amounting to 10c per share (8.5c per share after dividend withholding tax). The maximum annual dividend per share is prescribed in legislation, implying that shareholders do not share in the profits of the central bank in the way that they would share in the profit of a commercial enterprise. This information is also published in the *Annual report* of the SARB, which is available on its website.[15] Remaining profits of the central bank after the payment of company tax, allocation to reserves and the payment of dividends are transferred to the National Revenue Fund.

Shareholders of the SARB have limited institutional rights in the operations and activities of the central bank and no role to play in the central bank's policy conduct. Other than the right to be invited to and attend an ordinary general meeting of shareholders every year, they elect seven of the 15 members of the board of the central bank. They also appoint the external auditors of the SARB (see, e.g., Rossouw, 2014). These powers neither entrust to the shareholders any rights to be involved in the day-to-day management of the SARB, nor the right to influence monetary policy. As no shareholder (or group of shareholders linked either by means of family or business relationships) may hold more than 10 000 shares in the central bank, the shareholder structure is clearly not a conduit for a Jewish conspiracy to control the SARB.

Shareholders are invited to the ordinary general meeting of the SARB, hosted annually in Pretoria. Members of the public can ask the SARB for invitations to the ordinary general meeting, and the proceedings are published widely in the media. The ordinary general meeting and the shareholder structure of the central bank help to increase the transparency of the SARB.

Monetary policy decisions at the central bank are entrusted to the Monetary Policy Committee (MPC), which comprises the governor and deputy governors and four other officials of the SARB appointed by the governor. The board of the Reserve Bank has no role to play in the MPC's deliberations or decisions. It follows, therefore, that shareholders of the Reserve Bank do not play any role in monetary policy deliberations and decisions.

Other than its responsibility for containing inflation in terms of its inflation-targeting policy framework, the SARB is also entrusted with responsibility for financial stability. To this end, the central bank states that 'the Bank's role and mandate in overseeing and maintaining financial stability was reaffirmed by government in

14 https://www.resbank.co.za/Lists/News%20and%20Publications/Attachments/6250/Share%20price%20and%20availability.pdf

15 https://www.resbank.co.za/publications/detail-item-view/pages/publications.aspx?sarbweb=3b6aa07d-92ab-441f-b7bf-bb7dfb1bedb4&sarblist=21b5222e-7125-4e55-bb65-56fd3333371e&sarbitem=57950

a letter from the Minister of Finance addressed to the Governor dated 16 February 2010' (SARB, 2014, section (i)).

Padayachee (2014) elaborates on this function of the SARB and changes in ways in which the bank discharged this responsibility by stating that '(p)rior to 2008 most central banks, including the SARB, had an implicit financial stability mandate, and the view was that price stability would ensue financial stability'. Padayachee explains that in a letter to the bank, in the midst of the financial crisis, the Minister of Finance reinforced 'the central role that the Bank should play in maintaining financial stability' (*SARB annual report*, 2009/10, p. 3). As a result the Reserve Bank has since focused on this role in a much more explicit manner than before. Financial stability is beneficial to all stakeholders in an economy, not only to central banks shareholders. The SARB discharges its responsibility for financial stability in the interest of all stakeholders in the economy, not for the benefit of special interest groups and to the detriment of other 'outsiders'.

While the practice of having private shareholders in the SARB is shared with only a few other similar institutions (mostly in Europe), this structure does not allow for a conspiracy to exercise control over the central bank. This structure merely improves governance, as it burdens the central bank with more cumbersome public disclosure requirements than would have been the case without shareholders, including the obligation to host an annual ordinary meeting of shareholders, where the governor can be questioned on the central bank's policy and institutional conduct.

## CONCLUSION

Research into central banking in South Africa and elsewhere has rarely addressed the issue of the money creation process in a modern economy with a sophisticated financial system such as that of South Africa. In the background, a relatively uncontested view propagated in most economics departments' curricula continues to expound an orthodox position that money creation and money supply are exogenously set by central bank action. At various times in the past, and in the current era, a virulently anti-central bank sentiment and popular literature has surfaced which argues that central banks, acting on behalf of a so-called shadowy group of wealthy (Jewish) families (who we are told are the real owners of central banks around the world) are perpetuating a fraud on the general public by using the device of fractional reserve banking to 'create money out of thin air'. This article challenges the latter position by arguing that support for this 'conspiracy theory' approach cannot be found in the orthodox school, nor is there support for this view among most post-Keynesian approaches to the money creation question. However, there exists a wide range of positions within the post-Keynesian approach, and conspiracy theorists have (without real justification) latched onto an interpretation of the latter school of thinking in support of their (right-wing) populist position. Even some extreme left-wing critics

who see central banks as obstacles to a radical (cheap money) monetary policy share some common positions with their right-wing counterparts.

In this article we have presented our interpretation of the post-Keynesian approach which we support, drawing from Keynes, Minsky and more recent scholars, which sets out the view that money is created endogenously within the operations of the real economy. We show, too, why central banks, as part of the apparatus of big government (as suggested by Minsky) are important in the economic life of modern economics, provided that they are properly regulated and controlled. We then go on to show that central bank ownership takes many forms (in South Africa, the SARB is entirely owned by private shareholders), but that there is sufficient transparency in ownership and more than adequate regulatory oversight to guarantee against any irregular actions. In short, there no evidence whatsoever that central banks are actually owned by shadowy elite families who use them to make profits at the expense of the poor or the public at large.

However, this article does not have as its aim a blanket defence of central banks or the financial and banking sector. The role of private banks in supporting small business development in a country like South Africa, which leans more towards a market-based rather than a bank-based system of finance, clearly is one area in need of much more innovative policy development. The way in which the constitutionally independent SARB, with its inflation-targeting mandate, can and should also support economic growth and employment objectives, is also a subject which has generated some debate. These are important matters which fall outside the scope of this intervention.

Banks should continue to instil confidence in civil society, to ensure that the general public remains willing to place deposits at banks, thereby funding the loans banks make to businesses and the general public. Such loans support investment and economic growth. If trust is lost in banks and deposits are withdrawn, banks will run into liquidity problems and will not be able to continue their operations.

Attempts from people without a full understanding of financial systems to reform central banking and the financial system in general, are a bit like having a bridge designed without engaging qualified engineers. The result might look good and feasible, but it is more than likely to lead to a catastrophic disaster. It is our hope that this article will assist in contributing to a more solid understanding of such matters as fractional reserve banking, rather than relying on ideas derived from conspiracy theorists. Moreover, we hope – in the interest of a more rational debate – that the paper sheds some light on the question of central bank ownership and that it shows that the ownership arrangements of these institutions are not some conspiracy to defraud the public.

Theorists in both groups detailed above urge central banks to do a better job, whether it is to stabilise prices as the first group insists, or to expand money supply to support the real economy and ensure stability as the second group wants.

South Africa has, for the past century, enjoyed a reasonable degree of success in its objective of controlling inflation (see, e.g., Rossouw & Padayachee, 2011) and it has developed one of the most advanced and best regulated banking systems on the continent. Maintaining this historic record while remaining open to progressive ideas about how the SARB could support the growth and development of the real economy is the challenge that lies ahead. It is surely far more important for scholars of all persuasions to focus their minds on this latter task, than to fend off wild claims from conspiracy theorists about the ownership and operations of central banks. But sometimes such a responsibility is needed in order to set the record straight.

## ACKNOWLEDGEMENTS

The views expressed are those of the authors and do not reflect the position of the University of the Witwatersrand or the SARB, either now or in the past. We thank two anonymous reviewers and the editorial board for their valuable comments.

## BIOGRAPHICAL NOTES

**JANNIE ROSSOUW** is Head of the School of Economic and Business Sciences at the University of the Witwatersrand. Previously he worked at the SARB, where he served as Company Secretary and Deputy General Manager. He has published numerous academic papers in accredited journals in South Africa and abroad, and addressed local and international conferences on his research interests. His research focuses on monetary and fiscal policy matters.

**VISHNU PADAYACHEE** is Distinguished Professor in the School of Economic and Business Sciences at the University of the Witwatersrand. He served three terms (1996–2007) as non-executive director of the SARB. His current research interests include monetary history, theory, and policy in South Africa; the political economy of restructuring South Africa, a study of South African capitalism in historical perspective, and an analysis of the origins and evolution of ANC economic and social policy from 1940 onwards.

**BRADLEY BORDISS** recently completed a Master's degree in Economic History at Rhodes University and is in the process of registering for a PhD in the School of Economic and Business Sciences at the University of the Witwatersrand. He has a special research interest in the study of the role of economic policy experts in the making of economic policy in South Africa in the inter-war era.

## REFERENCES


Archive for Contemporary Affairs, UFS (University of the Free State), PV 515, folder 31/1/5. Bloemfontein.

Bain, K. and Howells, P. (2003). *Monetary economics: Policy and its theoretical basis*, 3rd edition, Palgrave Macmillan, Hampshire and New York.

Blinder, A., Goodhart, C., Hildebrand P., Lipton, D., and Wyplosh, C. (S.a.). *How do central banks talk?*, ICMB, Geneva.

Butz, A.R. (2002). 'Was Churchill's gold bug Jewish?', *The Journal of Historical Review*, vol. 21, no. 1, pp. 9–12.

Calomiris, C.W. and Haber, S.H. (2014). *Fragile by design – the political origins of banking crises and scarce credit*, Princeton University Library, Princeton.

Choudary, M. (2012). *The principles of banking*, John Wiley & Sons, West Sussex.

De Santana Vasconcelos, D. (2014). 'Minsky on big government', *Brazilian Journal of Political Economy*, vol. 34, no. 1, pp. 15–38.

European Independent Media Centre (EIMC). (S.a.). *List of banks owned by the Jewish Rothschild family*, Available at http://europeanmediacentre.wordpress.com/2013/09/02/list-of-banks-owned-by-the-jewish-rothschild-family/ (accessed 23 August 2014).

Eyler, R. (2010). *Money and banking*, Routledge, London and New York.

Faure, A.P. (2012). 'Redefining the money market', *African Review of Economics and Finance*, *v*ol. 4, no 1, pp. 129–150.

Fetter, F.W. (1965). *Development of British monetary orthodoxy, 1797–1875*, Harvard University Press, Cambridge, MA.

Fischer, E. (1911). *The purchasing power of money*, Macmillan and Co, New York.

Friedman, M. (1960). *A programme for monetary stability*, Fordham University Press, New York.

Friedman, M. (1969). *The optimum quantity of money: A comprehensive presentation of the body of monetary thought of one of the world's leading monetary economists*, Macmillan, London.

Fourwinds.10. (S.a.). 'Only three countries left w/o Rothschild Central Bank!', Available at http://www.fourwinds10.net/siterun_data/government/banking_and_taxation_irs_and_insurance/social_security/news.php?q=1320062234 (accessed 23 August 2014).

Godlike Productions. (S.a.): 'Here's a list of the Rothschild-owned central banks of the world', Available at http://www.godlikeproductions.com/forum1/message1903525/pg1 (accessed 23 August 2014).

Goodhart, C. (1984). *Monetary theory and practice: The UK experience*, Macmillan, London.

Goodson, S.M. (2014). *Inside the South African Reserve Bank: Its origins and secrets exposed*, Black House Publishing Ltd., London.

Hampton, M. (2014). 'SA's *ubuntu* party against corrupt banks, 18 February', Available at http://www.knysnakeep.org/south-africa-ubuntu-party-against-corrupt-banks/ (accessed 25 August 2014).

Hanke, S.H. (2007). 'Fewer central banks, please', Available at http://www.cato.org/publications/commentary/fewer-central-banks-please (accessed 23 August 2014). This article appeared in the June 2007 issue of *Globe Asia*.

Hume, D. (1752). 'Of the balance of trade', in Miller, E.F. (Ed.). *Essays, moral, political, and literary*, Liberty Fund, Indianapolis.

Hume, D. (1752). 'Of money', in Miller, E.F. (Ed.). *Essays, moral, political, and literary*, Liberty Fund, Indianapolis.

Keen, S. (2014). 'Endogenous money and effective demand', *Review of Keynesian Economics*, vol. 2, no. 3, pp. 271–291.

Keynes, J.M. (1913). *Indian currency and finance*, Macmillan & Co, London.

Keynes, J.M. (1923). *A tract on monetary reform*, BN Publishing, La Vergne.

Keynes, J.M. (1936). *The general theory of employment, interest and money*, Prometheus Books, New York.

Kruger, B. (S.a.). 'Jewish rule in South Africa', Available at http://www.boerevryheid.co.za/forums/archive/index.php/t-30482.html (accessed 23 August 2014).

Laidler, D. (1991). *The golden age of the quantity theory*, Princeton University Press, Princeton.

Lanscombe, G. (2014). 'The growth, employment and redistribution strategy in South Africa', *African Review of Economics and Finance*, vol. 6, no. 1, pp. 208–210.

Ludwig von Mises Institute. (S.a). 'Can central banks be tamed?', Available at http://mises.org/daily/6270/ (accessed 25 August 2014).

Ludwig von Mises Institute. (S.a.). 'Denationalisation of money: The argument refined', Available at http://mises.org/document/3970/Denationalisation-of-Money-The-Argument-Refined (accessed 24 August 2014).

Mabwe, K. and Webb, R. (2010). 'A financial ratio analysis of commercial bank performance in South Africa', *African Review of Economics and Finance*, vol. 2, no. 1, pp. 30–53.

Martin, F. (2013). *Money: The unauthorised biography*, The Bodley Head, London.

Minsky, H.P. (1975). *John Maynard Keynes*, McGraw-Hill, New York.

Minsky, H.P. (1986). *Stabilizing an unstable economy*, McGraw-Hill, New York.

Minsky, H.P. (1992). *The financial instability hypothesis*, Levy Economics Institute, New York.

Mishkin, F.S. (2004). *The economics of money, banking, and financial markets*, 7th edition, Pearson-Addison Wesley, Upper Saddle River.

Moore, B. (1988). *Horizontalists and verticalists: The macroeconomics of credit money*, Cambridge University Press, Cambridge.

Motiar, A. (2013). *The Reserve Bank = a license to steal money from citizens?*, Math and Literacy for Africa, Valhalla.

Mun, T. (1664). *England's treasure by foreign trade*, JG for Thomas Clark, London, Available at http://socserv2.socsci.mcmaster.ca/econ/ugcm/3ll3/mun/treasure.txt

Padayachee, V. (2013). 'Deepening democracy and accountability in central bank activity, the Reserve Bank in post-apartheid South Africa', *International Conference on the Human Economy: Economy and Democracy,* University of Pretoria, South Africa, August.

Padayachee, V. (2014). 'Central banking after the global financial crisis: The South African case', in Bhorat, H., Hirsch, A., Kanbur, R. and Ncube, M. (Eds.). *The Oxford companion to South African economics*, Cape Town, Oxford University Press.

Padayachee, V. and Bordiss, B. (2013). 'Barbaric gold and civilised banking: Keynes's Indian currency and finance – a view from the South after 100 years', *International Review of Applied Economics*, vol. 27, no. 6, pp. 822–833.

Palley, T. (2014). 'Milton Friedman's economics and political economy: An old Keynesian critique', Available at www.thomaspalley.com (accessed 26 November 2014).

Paul, R. (2009). *End the fed*, Grand Central Publishing, New York.

Pollin, R., Epstein G.A., Heintz, J., and Ndikumana L. (2007). *An employment-targeted economic program for South Africa*, Edward Elgar, Cheltenham.

Rochon, L.P. and Rossi, S. (2013). 'Endogenous money: The evolutionary vs revolutionary views', *Review of Keynesian Economics*, vol. 1, no. 2, pp. 210–229.

Rockwell, L.H. (Ed.). (1992). *The gold standard: Perspectives in the Austrian school*, Ludwig von Mises Institute, Aubern.

Rossouw, J. (2008). 'Inflation in South Africa: 1921 to 2006. History, measurement and credibility', Unpublished PhD thesis, School of Development Studies, University of KwaZulu-Natal.

Rossouw, J. (2011). *South African Reserve Bank: Commemorative publication 2011*, South African Reserve Bank, Pretoria.

Rossouw, J. (2014). 'Private shareholding and public interest: An analysis of an eclectic group of central banks', *ERSA Working Paper*, no. 457, Economic Research Southern Africa.

Rossouw, J. and Breytenbach, A. (2011). 'Identifying central banks with shareholders: A review of available literature', *Economic History of Developing Regions*, vol. 26, suppl. 1, pp. S123–S130.

Rossouw, J. and Powers, C. (2005). 'Communication in support of an inflation targeting policy: A note on the South African Reserve Bank', *South African Reserve Bank Discussion Paper DP/05/12*, South African Reserve Bank, Pretoria.

South African Reserve Bank (various years). *Annual reports*, South African Reserve Bank, Pretoria.

South African Reserve Bank (2014). *Financial stability review*, September, South African Reserve Bank, Pretoria.

Secrets of the Fed.com. (S.a.). 'Hungary kicks out Rothschild and joins three other nations with no privately owned central bank', Available at http://www.secretsofthefed.com/hungary-kicks-rothschild-joins-three-nations-privately-owned-central-bank/ (accessed 23 August 2014).

Snowden, B., Vane H., and Wynarczyk P. (2002). *A modern guide to macroeconomics*, Edward Elgar, Cheltenham.

Sunshine, S. (2014). 'The right hand of Occupy Wall Street: From libertarians to Nazis, the fact and fiction of right-wing involvement', Political Research Associates, 23 February, Available at http://www.politicalresearch.org/2014/02/23/the-right-hand-of-occupy-wall-street-from-libertarians-to-nazis-the-fact-and-fiction-of-right-wing-involvement/ (accessed 23 August 2014).

Tellinger, M. (S.a.). '*Ubuntu* contributions: A blueprint for human prosperity', Available at http://www.ubuntuparty.org.za/ (accessed on various dates).

Thornton, H. (1802). *An enquiry into the nature and effects of the paper credit of Great Britain*, J. Hatchard, Picadilly.

*Times of India* (1948, March 22). 'Reserve Bank against nationalisation', Available at http://rbi.org.in/history/Brief_RBI_Nationalisation.html (accessed 2 June 2014).

Tucker, P. (2009). 'The repertoire of official sector interventions in the financial system: Last report lending, market-making, and capital', *Bank of Japan International Conference*, May 27–28.

Ubuntu Liberation Movement. (S.a.). 'Only banking reform can save South Africa', Available at http://www.ubuntuparty.org.za/2014/05/only-banking-reform-can-save-south.html (accessed 23 August 2014).

Ubuntu Liberation Movement. (S.a.). 'CNBC Africa interviews Michael Tellinger', Available at http://www.ubuntuparty.org.za/2014/04/cnbc-africa-interviews-michael-tellinger.html (accessed 24 August 2014).

Van der Merwe, E., and Mollentze, S. (2010). *Monetary economics in South Africa*, Oxford University Press, Cape Town.

Van der Merwe E., Mollenze, S., Leshoro, T.L., Rossouw, J. and Vermeulen, C. (2014). *Monetary economics*, Oxford University Press, Cape Town.

Vasconcelos, D. (2014). 'Minsky on "big government"', *Revisita de Economia Politica*, vol. 34, no. 1, pp. 15–38.

Von Hayek, F.A. (1976). *Denationalisation of money: The argument refined – an analysis of the theory and practice of concurrent currencies*, Institute of Economic Affairs, London.

Weber, M. (1993). 'Ivor Benson', *Journal of Historical Review*, vol. 13, no. 3, pp. 20–21.

Wetterberg, G. (2009). *Money and power: From Stockholms Banco 1656 to Sveriges Riksbank today*, Sveriges Riksbank, Stockholm.

Wicksell, K. (1936). *Interest and prices: A study of the causes regulating the value of money*, trans. R.F. Khan, Royal Economic Society, London.

Wikipedia. (S.a.). 'Ivor Benson', Available at http://en.wikipedia.org/wiki/Ivor_Benson (accessed 23 August 2014).