GOVERNMENT DEBT LEVELS AND THE SYSTEMIC RISKS ASSOCIATED WITH POST-CRISIS FISCAL POLICIES

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ABSTRACT

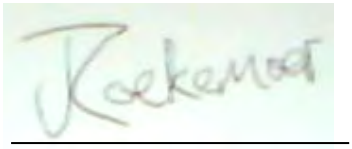
The study analyses the concepts of intergenerational equity and fiscal sustainability in South Africa. The question raised is whether or not South Africa can adopt stimulatory fiscal measures, with a simultaneous increase in debt, so as to improve long-term growth potential in a sustainable manner without creating an excessive burden on future generations.

The debate surrounding the use of stimulatory fiscal policy has come to the fore once again as monetary policy has become a restricted and ineffective macroeconomic policy tool in certain countries after the world-wide financial crisis and the Euro-debt crisis. Fiscal sustainability risks and high debt levels remain a source of concern in the United States and the Euro-zone, while South Africa presently seems to be at no great risk. With South Africa's intention to become a developmental state, the use and appropriateness of fiscal policy is considered.

An overlapping-generations model is used to determine whether or not future generations will be burdened due to current stimulatory policy. The use of fiscal rules in South Africa is discussed and considered in light of various political incentives and constraints. The conclusion given is that the possible use of a procedural fiscal rule, such as the 'golden rule', may add credibility to the current regime, while a numerical fiscal rule is seen as unnecessary given South Africa's responsible use of fiscal policy thus far. As it stands, there is little possibility or risk that the public debt in South Africa will become too high in the near future. Although South Africa has been affected by the crisis, the developmental nature of the economy has been sustained through the use of responsible discretionary fiscal policy, putting South Africa in a positive position to meet its long-run growth potential.

DECLARATION

Except for those references acknowledged in the text, this thesis wholly represents my own work and no part has been submitted for a degree at another university.

Signed: 

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1. INTRODUCTION

For many decades discretionary fiscal policy had been disregarded as the fundamental macroeconomic policy tool, as monetary policy was considered an effective means of stabilizing the economy. Krugman (2005: 515) notes that discretionary fiscal policy was considered unnecessary as well as inept in dealing with short-term recessionary pressure. However, long-lasting economic slumps emphasized the potential for discretionary fiscal policy to stimulate aggregate demand as sufficient time allowed policy-makers to implement appropriate corrective policy measures. As a result, the discretionary fiscal policy envisioned by early Keynesian advocates has experienced a revival in the last decade.

Blanchard *et al.* (2010: 202) note that the use of stimulatory fiscal policy was the central macroeconomic policy tool in the aftermath of the 'Great Depression' and the Keynesian-influenced era. Lerner (1943), in seeking to determine what type of policy produces sound results rather than unsustainable outcomes, termed discretionary fiscal policy as "functional finance" and was a strong proponent of such thinking at the time. Lerner (1943) proposed this economic theory on the principle of effective demand and the use of fiat money, while suggesting that government should fund itself in order to meet its unequivocal goals. Samuelson (1948), while acknowledging the advantages of using monetary policy as a complementary tool, was a strong advocate of the long-term benefits of fiscal policy. This policy stance was not, however, unopposed; Eisner (1969) and Okun (1971), for example, using the failure of the U.S. 1968 tax surcharge to reduce the Vietnam War-induced inflation as a foundation, raised arguments against the use of discretionary fiscal policy. Monetary policy gained greater recognition during the 1960's and 1970's, eventually becoming the preferred tool for discretionary macroeconomic policy in these two decades (Freedman *et al.*, 2009: 6). With the new millennium came a new outlook on fiscal policy. Earlier concerns regarding the limits, and effectiveness, of monetary policy when interest rates approached or reached the zero bound were again raised. Heller's (1966) belief in fiscal policy and his scepticism about the efficacy of monetary policy has accordingly seen a revival, and much of his research has again become relevant. The 2001-2003 U.S. tax cuts reflected a change in policy from the build-up of excessive budget surpluses into stimulatory fiscal policy through tax cuts that saw popularity shift back to more traditional Keynesian views (Blinder, 2004: 15).

The debate surrounding fiscal stimulus has recently come a full circle, with many highlighting the necessity for fiscal stimulus packages in a turbulent and fragile world economy. While the debate was previously focused on the desirability of the ongoing fine-tuning of the business cycle through the use of fiscal policy (Freedman *et al.*, 2009: 6), it is now set against the backdrop of a severe crisis in which monetary policy has become ineffective in stimulating demand. In this scenario, where monetary policy on its own would be rendered ineffective, a fiscal stimulus may be warranted as an emergency policy tool and would be the only option left to eliminate or reduce the output gap.

While the expansionary fiscal policy initiated by the United States government helped bring the 'Great Recession' to an end, fiscal sustainability risks still remain elevated after the 2008 financial crisis

(Papadimitriou *et al.*, 2011: 2). With the 2012 U.S. fiscal deficit standing at 8.1% of GDP and maturing debt rising to 17.7% of GDP, the total financing need for 2012 accumulates to 25.8% of GDP. While this is slightly less than the 2013 projected financing need of 26.2% of GDP with maturing debt for the same year increasing to 19.9% of GDP (IMF, 2012a: 3), the elevated levels are still of concern. Sovereign balance sheets in many advanced economies remain under strain as the vulnerabilities and structural weaknesses in the Euro-zone pose a threat to fiscal sustainability. With a legacy of high debt levels and excessive leverage, many advanced economies in the EU are now faced with the question of how to lower these deficits in a sustainable manner.

The IMF (2012b: 72) mentions that the South African economy is more exposed to weaknesses in the world economy than other African countries due to its strong international ties. Hence, it is understandable that growth levels were greatly affected in 2008 and 2009. As a middle-income, emerging economy, South Africa has had the benefit of relatively large real GDP growth rates in the past; enjoying pre-crisis annual growth rates of above 5% (IMF, 2012b: 197). Pravin Gordhan, during the national budget speech, mentioned that debt sustainability and intergenerational equity are two key fiscal focus areas for South Africa (S.A. Government, 2012: 8). This raises the question of whether or not the country can adopt stimulatory fiscal measures, with a simultaneous increase in the level of debt, to improve its long-term growth potential in a sustainable manner without creating an excessive burden on future generations. The issue is also relevant against the background of South Africa's stated intention to become a developmental state.

Regarding the issue of intergenerational equity related to the use of fiscal policy as an emergency tool, the analysis of a two-period model assists in evaluating the extent to which future generations are affected by a fiscal stimulus during such a recessionary period. Using a slight variation of the overlapping-generations model described by Barro (1974: 1098) (which was based on work done by Samuelson (1958) and Diamond (1965)), Corden (2010: 40) considers whether a fiscal stimulus will affect future generations. Period 1 is described as the period when there is initially an output gap and a fiscal stimulus is used to raise output and incomes. Period 2 is some time in the future in which output and income levels would either have recovered in the absence of a fiscal stimulus or as a result of the fiscal stimulus in the past. This is in accord with both Kumhof *et al.* (2010: 5) and Benhabib *et al.* (2011: 128) who use a similar framework in their research on fiscal policy and finitely-lived agents. Corden (2010) refers to the model as the 'Conservative Allegation', believing that people living in the second period would not be adversely +affected by the practice of a fiscal stimulus in the first period if there were a looming crisis. When considering Period 1, Corden (2010) does, however, emphasize the opposing result when there is no crisis. With no recessionary pressure, the people living in Period 2 would be adversely affected by a fiscal stimulus in the first period.

With the argument that fiscal policy has brought about unnecessary spending, and that the associated excessive budget deficits bring about unsustainable public debt, the use of fiscal rules have been proposed by many to limit these tendencies (Arestis and Sawyer, 2010: 329). Creel *et al.* (2009) provide a case for the use of the 'Golden Rule' (which is a balanced budget rule that allows deficit financing for public investment but not for current government spending), while Barrel and Weale (2010: 90) highlight the possible drawbacks. Du Plessis and Boshoff (2007) note that the South African fiscal authorities were bound by the golden rule until the 1970's. The question of whether or not South Africa should implement a fiscal rule, whether it is a numerical or procedural rule, given the current economic climate is a topic worth exploring. The trade-off between flexibility and credibility is a fundamental consideration that the government needs to take into account when deciding whether to impose a fiscal rule or not.

Having outlined the theoretical basis, the central goal of the research is to analyze the levels of government debt in the USA, Euro-zone, and South Africa before, during and after the crisis to enable a comparison of these with the levels required to maintain systemic financial stability. The qualitative nature of the literature study allows for a broad comparison of literature on the topic, while providing some quantitative indicators to substantiate and support certain arguments. The USA, certain Euro-zone countries and South Africa all form part of the case study approach that is used. After analyzing the United States' economy, as well as certain Euro-zone countries, South Africa will become the central focus of the study. By considering the level at which public debt becomes a source of concern and when it jeopardizes long-term fiscal sustainability, the analysis looks at the risks involved with post-crisis fiscal policies. The discussion of whether or not the current generation is possibly leaving an excessive debt burden on future generations aids the argument.

The fundamental question that needs to be addressed is whether or not the fiscal approaches taken during and after the crisis in 2008 have been the correct ones and whether these policies will influence future generations for better or worse. Chapter 2 considers the case for discretionary fiscal policy, highlighting the evolution of fiscal policy and the recent revival in popularity of the traditional views taken by early Keynesian followers. Having discussed the popularity of fiscal policy, Chapter 3 considers the extent to which the public debt undertaken (due to such discretionary policies) is sustainable in the medium and long-term. Chapter 4 considers, with the aid of an overlapping-generations model, whether the stimulatory fiscal measures taken during the crisis are likely to be equitable or detrimental to future generations. Finally, Chapter 5 discusses the political incentives associated with maintaining larger fiscal deficits, and the potential for formal fiscal rules to limit this bias. With goals of intergenerational equity and fiscal sustainability, South Africa is presently a particularly significant case in a turbulent world-wide economy.

2. THE NEED FOR DISCRETIONARY FISCAL POLICY

The debate surrounding discretionary fiscal policy has recently become popular with many activists highlighting the necessity for fiscal stimulus packages in a turbulent and fragile world economy. However, the subject should be seen against the background of a long standing debate. This debate focused on the desirability of the ongoing fine-tuning of the business cycle through the use of fiscal policy (Freedman *et al.*, 2009: 6). The recent debate, however, is set against the backdrop of a severe crisis in which monetary policy has become an ineffective tool in stimulating demand. For this reason, even strong opponents to the active and continuous use of fiscal policy have succumbed to the idea of using fiscal intervention as a once-off emergency tool. However, both cases rely on the same transmission mechanism to be present in order to become an effective policy tool. Essentially, the need for aggressive fiscal policy to be used to counteract business cycle fluctuations as opposed to traditional monetary policy measures, especially during recessions, is questioned.

2.1 IDEAS, EVENTS, AND HISTORY SURROUNDING FISCAL POLICY

The history of thought associated with fiscal policy has been inconsistent since its inception in 1936. Blinder (2004) aptly distinguishes between four periods of fiscal thought: The triumph of Keynesianism between 1936 and 1966; the collapse of consensus between 1967 and 1977; the period between 1981 and 2001 where large deficits crowded out stabilization policy; and finally the new era from 2001 onwards that has seen resurgence in discretionary fiscal policy.

2.1.1 *The Success of Keynesianism Thinking (1936-1966)*

Keynes' ideas concerning economic policy were popular in the latter part of the Great Depression, World War II, and the post-war economic expansion. The three decades following the publication of Keynes' '*General Theory'* (1936) were characterized by the growing popularity of fiscal policy, with many ultimately embracing Stein's (1969) labeling of the era as the "fiscal revolution" in the United States. Keynesian economics argues that private sector decisions often lead to inefficient macroeconomic outcomes. Freedman *et al.* (2009: 6) argue that this suggestion promotes the thought that the public sector should carry out active policy (including monetary policy) responses to stabilize output over the business cycle. This fine-tuning included a combination of fiscal policy actions by the government and monetary policy decisions by the central bank. With this in mind, Keynesian economics advocates a mixed economy in which the financial system is predominantly controlled by the private sector but the public sector and the government play a significant role.

Lerner (1943) discussed and highlighted the importance of well-timed budgetary adjustments when considering fiscal stabilization policies. At the time, Lerner termed such a fiscal stabilization policy as "functional finance". Lerner (1943: 39) questioned the way in which fiscal policy worked and functioned in an economy, rather than the previous method of focusing on the results and effects of such policies on the economy. A product of this thinking was a greater insight into what sort of policy produced sound results rather than unsustainable outcomes. Lerner (1943: 38) referred to 'the new fiscal theory', which was formulated by Alvin Hansen and put forward first in substantially complete form by Keynes, as a less intrepid and timid version of Lerner's own theory. Hansen argued that, as long as the ratio of debt to national income remained at a tolerable level, deficit spending was appropriate (Bell, 1999: 1). Hansen, however, did not support the use of fiscal policy as openly and boldly as Lerner did. Lerner (1943) strongly believed that the government's budget should be utilized to permanently maintain economic prosperity, while accusing Hansen of appeasing with the opposition and seeking attention by not fearlessly standing by the simplified and logical formulation of the proposed theory. Keynes and Lerner both agreed that the practice of 'pump-priming' was not a sufficient method of permanently raising the level of economic activity. Bell (1999: 2) mentions that 'pump-primers' believe that it may be necessary for government to use fiscal policy to stimulate demand, but feel that repeated stimuli are unnecessary. This is based on the premise that 'pump-priming' assumes that a new temporary expenditure will have a lasting effect in raising the level of economic activity (Dillard, 1948: 106).

Since Lerner did not see 'pump-priming' as an effective means of eliminating unemployment, he rejected the argument and proposed two "laws" that were fundamental in his proposition of functional finance. Firstly, Lerner (1943: 39) believed that the government was responsible for keeping the total spending rate on goods and services at a level that was necessary to purchase all the goods that the economy could produce. At this level of spending, Lerner (1943) believed that inflation and unemployment could be curbed. Manipulating the rate of spending would take place through the adjustment of government spending or the tax rate. Lerner, instead of promoting a non-accelerating inflationary rate of unemployment (NAIRU), advocated maintenance of true full employment, which he believed could be attained without setting off inflation (Bell, 1999: 2). Lerner (1951: 8) eventually noted that inflationary pressures may arise before full employment is reached; a change in perspective from his earlier work that believed that inflation would not emerge before full employment was attained. This insight brought him closer to the ideas of Keynes who recognized that a rise in prices may come about before full employment was achieved. As this first 'law' proposed by Lerner addressed the way in which a shortfall in total spending could be eliminated, he needed a second 'law' to describe the way in which this deficit could be funded. Hence, Lerner (1943: 40) suggested that interest-bearing government bonds should be the appropriate means to fund this deficit only if it were in the interests of the public to have less money available to them and to have more government bonds as a result. As a result, Lerner promoted the adjustment of public holdings of money and of government bonds, through government borrowing or debt repayment, so as to realize the rate of interest that brings about the optimum level of investment.

While the methods of financing the deficit are generally agreed upon, the varying, and most favorable, consequences still remain a highly debated topic to this day. Although this is discussed in more detail later, it is interesting to note that Lerner (1943) favored borrowing from the central bank to finance the deficit. Work done by Tobin (1961), Blinder and Solow (1973), and Buiter (1977) was strongly opposed to this method of financing the deficit. Forstater (1999: 7) highlights the emphasis that Lerner places on "functional finance" as a framework within which many policies may work instead of the misconception that "functional finance" is equated to a specific policy. The policies used depend on the economic circumstances at the time. Lerner, therefore, does not advocate large deficits under any and all circumstances, but rather supports the use of policy based on the understanding of the current dynamics of the financial and monetary system.

Samuelson (1948), in earlier work, was another proponent of discretionary fiscal policy. Initially Samuelson (1948: 358) highlighted the potential failure of monetary policy to ensure circulation of money against new goods and new jobs. He noted that the government can force money into circulation in exchange for government bonds, but this money will not necessarily be used in the creation of new products and jobs. Samuelson (1948: 358) summed up this form of inefficiency as he famously quoted that a central bank "can lead a horse to water, but you can't make him drink". Although he recognized the differing benefits of fiscal and monetary policy, he clearly favored the former. Brazelton (1977) highlights how Samuelson later changed his views as popularity in monetary policy grew.

Since at this stage the principles of fiscal policy had been well established, there was more focus placed on the implementation of such policies. Musgrave (1948: 384) notes that changes in the level of public expenditure or in tax rates is a means to adjust deficits or surpluses. This discretionary policy, in the view of Musgrave (1948), is a policy tool that can be used to fine-tune the economy. However, in times of recessions, Musgrave (1948) alluded to a form of *ex ante* rules that the government could establish in order to implement stimulatory measures when certain economic conditions transpire. These rules that Musgrave referred to as "formula flexibility" had the advantage of allowing prompt fiscal adjustment without the need for congressional delegation, hence eliminating the delays that are often associated with policy enactments due to political processes. Vickrey (1949: 144), in an analysis focused on income tax and income elasticity, reiterated the potential benefits of using fiscal rules, noting that Musgrave's built-in flexibility could potentially prevent a large proportion of the decline in national income that would otherwise develop in such a situation. Musgrave (1948: 387) did, however, draw attention to the disadvantages of using such a mechanism, noting that "formula flexibility" can often become too mechanical as fluctuations in income or employment might need different compensatory action given the presiding economic environment. Work surrounding fiscal rules has gained greater momentum in recent times with Solow (2002), Siedman (2003), Blinder (2004), and Groneck (2008) all striving to revive the idea of converting discretionary policy into automatic stabilization.

The 1964-1965 Kennedy-Johnson tax cut that was legislated in the Revenue Act of 1964 was the first time the United States consciously used fiscal policy. Romer and Romer (2007a: 52) note that the motivation behind these tax cuts was to stimulate the economy by eliminating fiscal drag and ultimately improve long-run growth. The United States' economy showed no inclination toward a recession at the time the act was proposed or later when it was passed. This tax cut was not intended for countercyclical purposes, but was proposed as a means to build the fundamental strength of the United States' economy and to improve long-term growth prospects. The tax cuts did, however, have countercyclical benefits and helped guard against the possibility of future recessionary pressure. With this in mind, Blinder (2004: 10) emphasizes the adjudged success of these tax cuts by the general public and by members of Congress. Heller (1966), in light of the success of these reforms, proposed that fiscal and monetary policy be put on constant alert instead of sporadic vigilance, providing stability at high rates of employment and growth that the market itself, left alone, could not attain. In order to achieve this, Heller (1966: 69) believed that fiscal policy should involve greater levels of activism and that it should "rely less on automatic stabilizers and more on discretionary action". This pattern of thought epitomizes the popularity surrounding fiscal policy in the three decades following Keynes' '*General Theory*' in 1936.

2.1.2 *The Collapse of Consensus (1967-1977)*

The consensus surrounding the ability of discretionary fiscal policy to influence the economy and maintain stability lost a great deal of support in the decade starting in the mid 1960's, eventually completely collapsing. This was due to fiscal policy being seen as inherently inflationary. Taylor (1999: 12) and Freedman *et al.* (2009: 6) note that, after the late 1960s and 1970s, monetary policy popularity improved, playing an essential countercyclical role through the achievement of superior price levels in combination with stabilized output. Monetary policy was now seen as the tool that discretionary macroeconomic policy should rely on. The reason behind this change in policy perception was due to a series of adverse events that initially shocked the economic system, and then ultimately destroyed the confidence instilled in fiscal policy. Okun *et al.* (1970) argue that fiscal policy became excessively stimulatory during the build-up to the Vietnam War. The Vietnam War was influential in amassing an increase in government spending atop an economy that was already at full-employment. At the time, President Johnson overrode his counsel of advisors, which sided with the Keynesian consensus, and continued with the war efforts without raising taxes or cutting back on government spending (Blinder, 2004: 11). The outcome of this was a sharp rise in inflation as the economy moved closer to an era synonymous with the term 'Great Inflation'. Keynesian economics was held responsible for the rise in inflation, and was unjustly labeled as being inherently inflationary (Blinder, 2004: 11). Hall and Hart (2010: 5) reiterate this point and highlight that the policy choices during this period were focused more on maintaining high or full-employment rather than preventing or decreasing the level of inflation.

Phelps (1968) and Friedman (1970) challenged the notion that the Phillips Curve represented a long-run, exploitable trade-off between the rate of unemployment and the rate of inflation. Barro (1976) gave a

similar opinion as he advocated the use of monetary policy, only differing from Friedman's proposal by disputing the extent to which the monetary authority has superior economic information. The line of argument that was followed, which placed a great amount of pressure on the popularity of fiscal policy, was that the attempt to keep unemployment below the natural rate would ultimately drive inflation to even higher levels.

Regarding policy, Eisner (1969) and Okun (1971) raised arguments against discretionary fiscal policy, using the failure of the 1968 tax surcharge to reduce the Vietnam War-induced inflation as the foundation of their argument. The failure of this surtax to curb inflation resulted in two specific downfalls of fiscal policy being brought to attention. Firstly, Eisner (1969) emphasized that the activist use of tax policy for stabilization purposes proposes the use of temporary, and sometimes frequent, changes to income taxes. This however, seems to be in contradiction to the Permanent Income Hypothesis (PIH), where temporary tax changes in income have little effect on consumer spending, while permanent changes can have large effects on consumer spending behaviour (Blinder, 2004: 12). Eisner (1969) pointed this out, emphasizing the way in which fiscal policy undermines its own efficacy through the use of temporary tax changes as a stabilization policy. Gordon and Okun (1980) proceeded to analyse the behaviour of aggregate demand during the 1963-1973 period, highlighting the impact of the temporary income tax surcharge in 1968. After analysing the macroeconomic indicators, Gordon and Okun (1980: 138) concurred with Eisner (1969) and believed that the consumption effects from a temporary tax change were uncertain and weak. Although the 1970 recession was mild in nature, it did highlight the second criticism of fiscal policy at the time. The enactment of the tax increase took two and a half years, illustrating the potentially long delay in enacting such fiscal policy measures (Blinder, 2004: 11). This undermined the effectiveness of fiscal policy once again as any general recession, at the time, would typically not last longer than one year. This proved to become a strong argument against discretionary fiscal policy as fiscal stabilization fell out of favour.

These two fiscal policy failures were brought to light again in the deep recession of 1974-1975, where President Nixon, and thereafter President Ford, failed to initiate any anti-recessionary policy response until it was too late. Romer and Romer (2007a: 48) discuss the Tax Reduction Act of 1975 that saw the government pursue a policy that sought to return economic growth to normal levels. Although the enactment of the tax cuts was not as delayed as before, the slight delay combined with the temporary nature of the tax cuts seemed to be a replication of the concerns raised a few years earlier. Blinder (1981) concluded, based on the 1968 and 1975 episodes, that temporary tax changes had approximately half the short-term impact on aggregate demand as similar-sized permanent tax changes would have had. The choice of monetarists to attack fiscal policy on the weak tax effects due to the PIH, as well as the potential for long inside lags in fiscal policy enactment, allowed many to associate these problems with a general criticism of fiscal policy. When reconsidering the case against fiscal policy, these two problems

actually have "little to do with the monetarist claim of fiscal impotence owing to a vertical LM curve" (Blinder, 2004: 12).

As the monetarist view gained momentum, an emerging neoclassical school of thought started to challenge the classical Keynesian thinking. Nordhaus and Tobin (1972: 2) highlight the emergence of this modern growth theory and emphasize its focus on the growth of potential output. The theory distinguishes between three determinants of potential output: the labour force, the state of technology, and the supply of human and tangible capital. During this time neoclassical economics was seen as a deliberate effort to boost growth of potential output, by specifically aiming to improve the productivity of labour (Nordhaus and Tobin, 1972: 3). In order to foster growth, the neoclassical model had specific policies focused on measures that developed technological knowledge and expertise as well as processes that sought to improve the accumulation of human and physical capital, hence improving potential output. An implication of this model was that, unless technological progression took place, policy could not permanently improve the rate of growth. Nordhaus and Tobin (1972: 3) believed that one-time policy measures could speed up growth temporarily but, once the economy had absorbed these measures, future growth rates would once again be constrained by technology and labour. These growth measures provided difficulties in that they came with a disposition of resources from other uses; they came with the trade-off of current consumption for the benefit of succeeding generations of consumers. In this regard, advocates of these growth policies sought to improve future conditions at some cost to current conditions. Nordhaus and Tobin's (1972) view lies in the suggestion that, in a market economy left to its own accord, too small a fraction of current output would be saved, hence negatively affecting future prospects.

2.1.3 *Large Deficits and the Associated Stabilization Policy (1981-2001)*

The Reagan administration's fiscal policies proved to be another milestone in the history of fiscal policy. Peterson (1985: 575) describes these as the boldest, yet most problematic, of efforts to change the domestic macroeconomic agenda. This transformation saw deficits grow to unprecedented levels in peacetime history, with fiscal responsibility becoming a cause for concern in a period dominated by monetary policy activism. The massive tax cuts in 1981 were not justified by the (then disparaged) Keynesian aggregate demand thinking, but by a new doctrine called supply-side economics (Blinder, 2004: 13). President Reagan was able to persuade many in congress, and those within his own administration, to tolerate such deficits due to changes in two key factors at the time. Firstly, public opinion had changed and became more focused on the extent to which the government could provide services at a lower cost. Secondly, and more importantly, the professional opinion of the short-term effects of fiscal deficits had changed considerably, with monetary policy playing a greater role in the management of the business cycle (Peterson, 1985: 576). Friedman (1992: 3) suggested that the reduction in tax revenue in 1981 did not restrain government spending enough to avoid the emergence of historically large deficits. Despite the suggestion that growth in overall spending should decrease, the five years following the 1981 tax cuts

saw total expenditure increase by 23% - a considerably larger figure than the 14% growth observed in the five years preceding the tax cuts (Romer and Romer, 2007b: 38).

The legacy of large deficits left by the Reagan administration encouraged a repositioning of fiscal policy away from cyclical stabilization policy towards secular deficit reduction (Blinder, 2004: 13). A series of tax increases were developed with the intention of reducing the budget deficits that resulted from the 1981 tax cuts. Romer and Romer (2007b: 39) point out that the Tax Equity and Fiscal Responsibility Act of 1982 was the first attempt to readjust the agenda of certain provisions set out in the 1981 act. The Deficit Reduction Act of 1984 and the Omnibus Reconciliation Act of 1987 were also attempts to reduce the budget deficit and bring it in line with sustainable levels, while advocating fiscal responsibility. The Gramm-Rudman-Hollings Act of 1985, which was not fully endorsed, was an example of the extent to which fiscal prudence had taken precedence at the time (Blinder: 2004: 13). The act, had it been abided by, would have even constrained the ability of automatic stabilizers to have any effect on the economy as requirements to adhere to strict annual budget deficit targets would have been enforced. In 1990 the economy slipped back into recession, while at the time a fiscal stimulus was completely out of the question. The Omnibus Reconciliation Act of 1990 was enacted and actually increased taxes in order to reduce the fiscal deficit. This was welcomed by Keynesian economists out of desperation to reduce the fiscal deficit, although a fiscal stimulus would have been their preferred policy action.

The 1990's saw even larger deficit-reduction packages being passed by Congress under the eye of President Clinton. The Clinton era focused on reducing the budget deficit, balancing the budget, and eventually building a sizeable budget surplus. Taylor (2000: 34) notes that tax revenue in the late 1990's rose due to the rapid increase in the income of high-income, highly-taxed people. This gave the appearance of the presence of countercyclical policy where economic growth was accompanied by higher tax rates. Blinder (2004: 14) mentions that, due to the Clinton boom starting after a deficit-reduction package was enacted, many started to question the direction of impact of the fiscal-policy multiplier. The notion that raising taxes and reducing government spending would expand, rather than contract, economic growth became the direction followed during this era. The idea of growing the United States' economy by reducing the budget deficit (or increasing the budget surplus) dominated government's thinking, giving little thought to how this would actually happen (Blinder, 2004: 14). This process of thought, however, was deeply anti-Keynesian. Taylor (2000: 34) emphasizes this by describing the seemingly well-timed countercyclical fiscal movements of the structural surplus in the 1990's as a mere "coincidence".

In the academic literature the 1980's and 1990's produced a great deal of research surrounding deficits and their implications on the economy. A good example of such work was published by the *National Bureau of Economic Research* in a conference volume, where Gordon (1986) failed to include a chapter regarding fiscal policy even though the general theme of the research was focused on the cyclical behaviour of the economy. Included instead was a chapter by Barro (1986) that discussed the behaviour

of the United States' deficits, focusing on the tax-smoothing principle that was toiled over in previous research. The proposal that deficits are altered in order to maintain expected steadiness in tax rates is the central suggestion made by Barro (1979). This theory of public debt is constructed by first accepting the Ricardian equivalence theorem, but where the optimal time path of debt issue becomes a central theme as the timing of taxation implies the possibility of an excess burden (Barro, 1979: 940). Other literature at the time included work from Blanchard (1984) who discussed the effects of deficits in Europe and the United States, citing the need for fiscal sustainability and the determinants of such sustainability. However, this research was used (mistakenly) to argue the case of the Clinton boom. This was done by suggesting that a credible reduction of the expected future budget deficits could in effect improve aggregate demand through lowering present long-term interest rates (Blinder, 2004: 14). Similar work done by Turnovsky and Miller (1984) was used to support the same argument. However, neither suggested that a current reduction in deficits would be expansionary and therefore did not entirely advocate the general 'deficit-reduction' mind-set at the time.

2.1.4 *The New Epoch (2001- Present)*

With the new millennium came a new, seemingly contradictory, outlook on fiscal policy. The 2001-2003 tax cuts reflected a change in policy from the build-up of excessive budget surpluses into stimulatory fiscal policy through tax cuts that saw popularity shift back to more traditional Keynesian views. Romer and Romer (2007b: 40) note that initially the administration maintained its views on budget deficit reduction, or preserving the surplus, as well spending restraint. It was only after the attacks on September 11th 2001 that the Bush administration placed less emphasis on spending restraint. Blinder (2004: 15) describes how these tax cuts were not recommended as a means of stabilization policy and that the Federal Reserve became concerned that the economy may be overheating. This was until the slowdown in 2001 where the administration changed its rationale for the cuts in tax to the traditional Keynesian view of stimulating aggregate demand. One notable problem with the tax cuts was that they were not followed up with counteracting tax increases, leaving open the question of how the United States government was to deal with the loss in revenue (Romer and Romer, 2007b: 42). The most exceptional insight into the beginning of this era is the complete failure of the political parties to notice the inconsistency in fiscal policy views; the Clinton-era believing that a deficit reduction would stimulate the economy, while the Bush administration adopted a more traditional Keynesian stimulus through deficit expansion.

The resurgence of Keynesian thinking meant that the liquidity trap became a topic of discussion again. Erceg and Linde (2010: 2) emphasize that the liquidity trap is a result of an adverse expectation that sharply lowers the ability of the real interest rate to have any effect on the economy. Injections into the private banking sector (by the central bank), that are aimed at lowering the interest rate, fail to stimulate aggregate demand, highlighting the key concept behind this Keynesian theory. Blinder (2004: 16) mentions that the U.S. was concerned in the early 2000's about such a predicament as the Federal Reserve lowered interest rates towards 1% with little effect on the revival of the economy. A similar case that had

previously entrapped the Bank of Japan became a source of concern for the United States. The extent to which the downside effects of the Keynesian liquidity trap would be felt would be realized towards the end of the same decade.

A few years later, under the Obama Administration, the United States was faced with a new set of challenges. The 2007 sub-prime mortgage crisis, and the extended world-wide financial crisis, brought fiscal policy to the fore as a potentially valuable macroeconomic tool. Blanchard *et.al.* (2010: 205) highlight two central reasons for this. Firstly, the fact that monetary policy, including quantitative easing and the use of credit, had reached its limits. Secondly, due to the long-lasting nature of the recession, fiscal policy proved to be an effective tool as the implementation lags that come with such policy enactments became a less significant problem. With regards to this, the concept of 'fiscal space' has recently become an important notion (IMF, 2012a: 4). Some advanced economies that entered the crisis with high levels of debt and unfunded liabilities have had limited capacity and scope in the use of fiscal policy, while in contrast there were many emerging market economies that entered with low levels of debt that were able to use aggressive fiscal policy measures without severely jeopardizing fiscal sustainability

The collapse of Lehman Brothers in September 2008 initiated widespread panic; liquidity dried up, stock prices plummeted, and a string of major institutions became insolvent. In October 2008 the United States Congress established the Troubled Asset Relief Program (TARP), highlighting the need to inject capital into some of the country's largest banks (Blinder and Zandi, 2010: 2). TARP was a programme adopted by the U.S. government to buy toxic assets and equity in order to strengthen the United States' financial sector balance sheets. TARP was highly controversial from its inception, as much of the US$700 billion headline outlay for the programme went towards "bailing out" companies that were in fact responsible for the initial panic. With the exhausted tool of monetary policy providing little additional stimulus, the United States Congress passed, and the President signed into law, the American Recovery and Reinvestment Act (ARRA) of 2009 (U.S. Government, 2009: 17). Keynesian economic thinking proved to be the rationale behind ARRA. The 2010 fiscal year was an important year for the United States as fiscal responsibility started to replace fiscal recklessness. Long-term challenges had been ignored, with spending growing out of control and becoming unsustainable.

From an academic viewpoint, the last few years have seen resurgence in the popularity of Keynesian thinking; highlighting the advantages and disadvantages of using such policy measures in recessionary periods. Minsky (1982) proposed the Financial Instability Hypothesis (FIH), which has become a popular synopsis of the recent financial crisis with Nesvetailova (2008), Hume and Sentance (2009), Keen (2010), and Silipo (2010) providing evidence of the similarities between Minsky's theory and what actually ensued many years after the hypothesis was proposed. The debt-deflation theory, attributed to Fisher (1933), seemed to be evident in the FIH as a general theme of over-indebtedness and instability is shared between the two theorems. Lawlor (1990: 436) notes that Minsky (1982) shared the same outlook on the monetary nature of the economy as Keynes, but differed greatly from the way that Keynes looked at the

business cycle as a dynamic process rather than static equilibrium positions. While the FIH seems to provide a good summation of the events leading up to the crisis, a great deal of literature has come out surrounding the liquidity trap that has arisen as a result. Such literature included work by Erceg and Linde (2010) that focused on the various methods that the U.S. government could use to get out of the liquidity trap, eventually concluding that a fiscal stimulus is the best option. Christiano, Eichenbaum, and Rebelo (2010), as well as Eggertsson (2009), provide a strong analysis of the economy when the nominal interest rate is constrained by the zero-bound and agree that government spending is effective in raising output and consumption. Heller's (1966) belief in fiscal policy and his scepticism about the efficacy of monetary policy seems to provide a decent account of the restored confidence in fiscal policy in the 'new era'.

Although the aggressive fiscal policy that the United States undertook is argued to have been warranted by exceptional circumstances, it has also exposed the shortcomings of discretionary fiscal policy during times of more 'normal' fluctuations (Blanchard *et al.*, 2010: 206). These drawbacks can be seen in the form of lags between the formulation, enactment, and implementation of fiscal responses in times where appropriate adjustments are needed. In the long-run, debt-related challenges still remain large for the United States as substantial adjustment over the next decade needs to be undertaken to bring debt ratios in line with sustainable levels. The United States needs credible medium and long-term strategies that include entitlement reforms and spending cuts as a central focus, addressing the growth of age-related spending and issues surrounding revenue measures (IMF, 2012a: 24).

2.2 CONCLUSION

The views surrounding discretionary fiscal policy have come full circle since their inception in 1936. The well-known ideas of Keynes (1936) gained much support over the first three decades, with fiscal policy activists emphasizing their support for discretionary policy during the latter part of the Great Depression, World War II, and the post-war economic expansion. Lerner (1943) was a strong proponent of the use of aggressive fiscal policy, clashing with many who disagreed. Samuelson (1948) also advocated the use of discretionary fiscal policy, but recognized the potential benefits of using monetary policy as a complementary policy tool. Musgrave (1948) believed that *ex ante* rules, or fiscal rules, were a beneficial tool in establishing much-needed boundaries for discretionary fiscal policy. Heller (1966) was another advocate of fiscal policy, believing that more focus should be placed on the discretionary nature of fiscal policy instead of reliance on automatic stabilizers.

In a single decade between 1967 and 1977, discretionary fiscal policy lost all credibility as monetary policy rose to the fore as a macroeconomic policy tool. The Vietnam War was influential in amassing excessive government spending on top of an economy that was already at full-employment. Phelps (1968), Friedman (1970), Barro (1976), and Gorden (1980) were among a few that strongly supported the use of monetary policy, while Eisner (1969) and Okun (1971) attacked discretionary fiscal policy from a theoretical point of view.

The large deficits under the Reagan era created concern for fiscal sustainability at a time that saw a great deal of monetary policy activism. The large deficits left by the Reagan administration meant that discussion surrounding fiscal policy moved away from cyclical stabilization and focused on secular deficit reduction. In the 1990's the idea that the government can stimulate the economy by reducing the budget deficit, or by increasing the budget surplus, was a misconstrued concept that gained a great deal of attention at the time. Previous work done by Blanchard (1984) and Turnovsky and Miller (1984) provided a theoretical base for this to take place, but were misinterpreted and used as a foundation for many activists to argue the case for deficit reduction.

With the new era came a different outlook on fiscal policy. The transformation in policy thought seemed to change within a very short period of time, shifting the popularity back to more traditional Keynesian views. The Bush administration, somewhat contradictorily, placed less emphasis on spending restraint as tax cuts were used to stimulate the economy. The Keynesian concept of the liquidity trap came to the fore as the efficacy of monetary policy was questioned. The 2007 sub-prime crisis, and the resultant world-wide financial crisis, gave a substantial argument for Keynesian economics and the liquidity trap. With Minsky's (1982) Financial Instability Hypothesis giving a good synopsis of the events leading up to the crisis, authors such as Eggertsson (2009), Erceg and Linde (2010), and Christiano, Eichenbaum, and Rebelo (2010) gave a theoretical foundation to use government spending as a means to improve aggregate demand and stimulate the economy.

This being said, the focus has now turned to fiscal sustainability and the level at which public deficits become a source of concern for an economy. The depressed growth levels experienced during and after the crisis, combined with excessive accumulation of debt, can result in unsustainable debt levels. Fiscal policy has been considered from a very general perspective until now, focusing on its potential to provide stabilization in the business cycle. The following focuses on the efficacy of discretionary fiscal policy in light of a large recessionary period where monetary policy has become an ineffective stimulatory tool, while focusing on the extent to which present policy decisions influence future generations.

3. THE SUSTAINABILITY OF PUBLIC DEBT

The previous chapter examined the desirability of discretionary fiscal policy and the potential stimulatory benefits it can provide when monetary policy becomes an ineffective tool in boosting aggregate demand; the extent to which the public debt undertaken is sustainable in the medium to long-term is now considered. The IMF (2012a) discuss the concept of 'fiscal space'. Some advanced economies that entered the crisis with high levels of debt and unfunded liabilities have had limited capacity and scope in the use of fiscal policy, while in contrast there were many emerging market economies that entered with low levels of debt that were able to use aggressive fiscal policy measures without severely jeopardizing fiscal sustainability. The notion of 'fiscal space' is strongly associated with the concept of fiscal sustainability.

3.1 INSUFFICIENT GROWTH LEVELS AND THE SUSTAINABILITY OF DEBT

According to the IMF (2012a: 4), the fiscal stance of a country is considered sustainable if "the present-value budget constraint – in which the current debt is less than or equal to the discounted value of future primary surpluses – is satisfied at all times". Fiscal policy is used to reduce unsustainable debt ratios and bring them in line with ratios that provide stability in the medium term. This, however, depends on the extent to which the country in question has the fiscal space to implement such policies. Fiscal space may be limited for many countries, even in the case of declining debt ratios. For this reason, the recovery after the crisis may be more difficult than previously envisioned, focusing on the possibility of public debt levels becoming unsustainable in the medium to long-term.

Alesina and Giavazzi (2012: 8) make a simple (yet often overlooked) point that, when considering the debt/GDP ratio of a country, it is not necessarily an increase in government debt that increases this ratio. If debt rises but the growth in GDP does not rise proportionately, the ratio will increase. Therefore, the level of economic growth that a country is faced with is a crucial determinant of the sustainability of long-term debt. Easterly (2011: 2) argues this point, mentioning that if fiscal policy does not adjust accordingly to a slowdown in growth, the debt/GDP ratio will rise, creating concern around the sustainability of public debt. Easterly (2011) also argues that the growth projections by fiscal authorities are often too optimistic, and hence provide a case for the failure of fiscal policy to adjust accordingly. The depressed growth levels due to the financial crisis have far-reaching implications when considering debt sustainability. By analysing the debt and growth dynamics of specific countries the need for, and desirability of, further fiscal adjustments is brought to the fore.

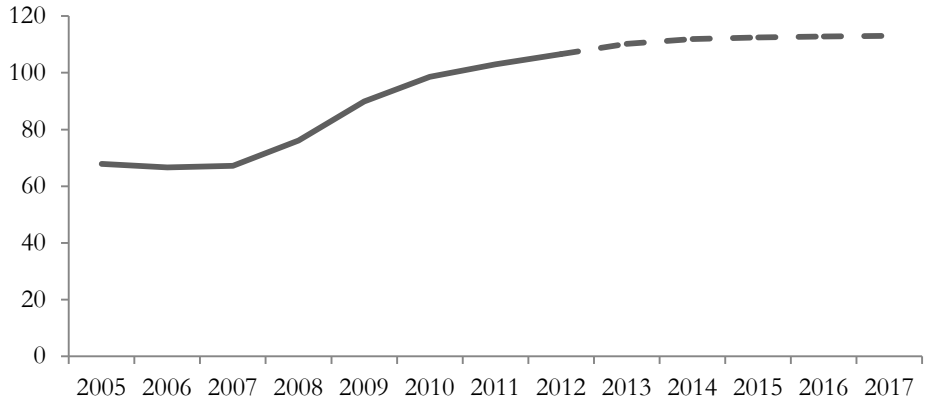
3.1.1 *The United States Case*

In 2008, the Federal Reserve aggressively lowered interest rates, eventually adopting a zero-rate policy by the end of the year. The tax proposals outlined in the 2008 budget highlighted the desire of the United States to promote economic growth and consequently increased tax receipts. With attention being focused on tax reforms and expenditure on national security, the 2008 fiscal year sought to restrain

discretionary spending (U.S. Government, 2007). Due to a collapse in output and the related loss in revenue, the output gap grew to a larger than desired level. In October 2008 the United States Congress established the Troubled Asset Relief Program (TARP), highlighting the need to inject capital into some of the country's largest banks (Blinder and Zandi, 2010: 2). With the introduction of TARP, future adjustment plans became a priority to maintain control of the greater debt levels associated with this fiscal stimulus. The economic growth experienced by the U.S. in 2008 needed an impetus to stimulate the economy towards a path of economic recovery even if it meant an increase in government debt levels. This was clearly evident as *Graph 1* and *Graph 2* illustrate the increase in general government debt during this time.

Graph 1

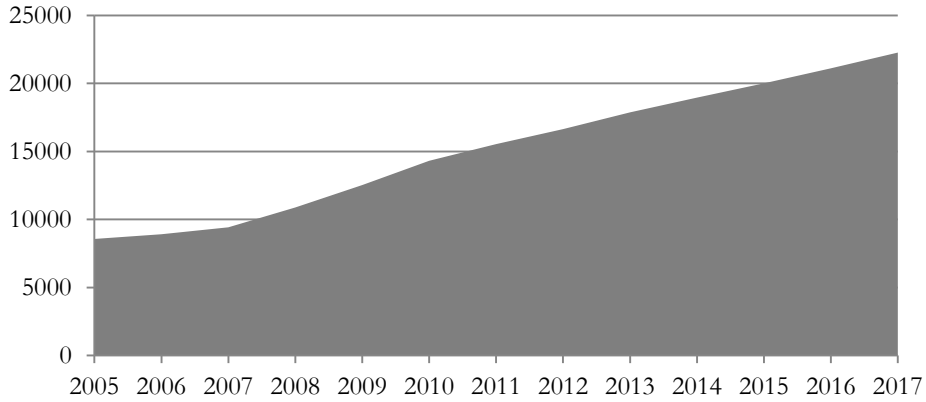
U.S. General Government Gross Debt
(Percent of GDP)



Source: IMF (2012a)

Graph 2

U.S. General Government Gross Debt
(Billions of U.S. Dollars)



Source: IMF (2012a)

The 2009 fiscal year was overshadowed by the need for immediate relief and the task of jumpstarting the economy; it was clear that the output gap was growing, putting the United States in a precarious position. With depressed economic growth figures (as illustrated in *Graph 3)*, there was little to sustain the increased demands and fiscal obligations faced by the U.S. government. With monetary policy unable to provide additional stimulus, the United States Congress passed, and the President signed into law, the American Recovery and Reinvestment Act (ARRA) of 2009 (U.S. Government, 2009: 17). This stimulus package was a nationwide effort to transform the economy into a more competitive one with the primary objective of immediate job creation. The recessionary public spending increases sought to offset the decrease in aggregate demand, create jobs and stimulate the economy; Keynesian economic thinking proving to be the rationale behind this policy action. During 2009, the United States government had also planned to purchase up to US$300 billion in T-bills, $1.25 trillion in mortgage-backed securities (MBS) of government-sponsored enterprises (GSEs), and general GSE debt up to the value of US$200 billion (IMF, 2009: 19). This reflects the sizable increase in planned government debt in the United States during this year.

Longer-term challenges had been ignored, with spending growing out of control and becoming unsustainable. With the first round of quantitative easing (QE1) in the United States ending in 2010, a second round (QE2) was undertaken in November that year in an attempt to loosen credit markets and enhance growth and employment (Papadimitriou *et al.,* 2011: 2). The 2010 fiscal year was an important year for the United States as fiscal responsibility started to replace fiscal recklessness. The fiscal deficit in 2010 still exceeded what would usually be necessary to stabilize the public debt ratio. Vines (2010: 4) questioned the rate at which the U.S. deficit should be consolidated, emphasizing that the speed at which deficits are reduced greatly affects economic growth. At this stage, however, the outlook still saw the public debt ratio worsening in the future with fiscal consolidation efforts having a limited chance of bringing the ratio down by 2011 (IMF, 2010: 21). The 2010 budget sought to support, and even extend and expand, the down payments made in the previously mentioned Recovery Act (ARRA) (U.S. Government, 2009: 19). More than $40 billion was disbursed to medical aid programs to alleviate further cuts in medical assistance, while nearly $60 billion was spent on education, saving and creating 300 000 jobs in this industry alone. This again highlights the Keynesian thinking and the primary objective of job creation that the Administration believed were the appropriate recovery path to follow. In December 2010, a fiscal stimulus package was implemented that consisted of an extension of tax cuts and emergency unemployment benefits (IMF, 2011a: 2).

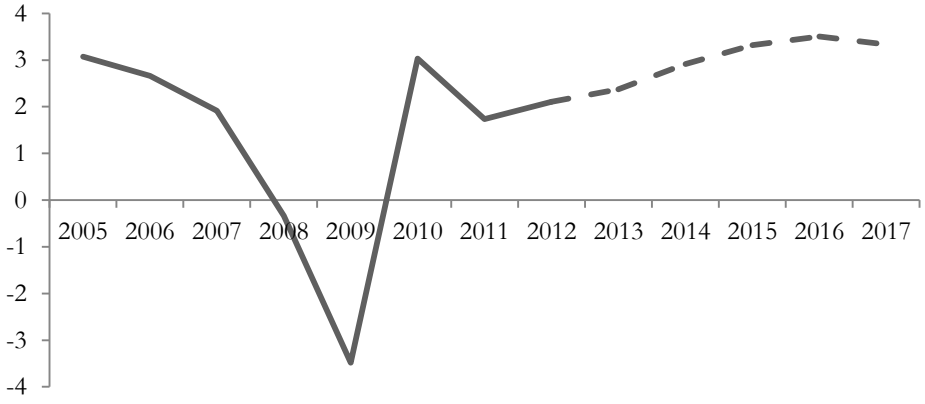
At the beginning of 2011 the United States was the only large advanced economy targeting an increased cyclically adjusted deficit, despite a narrowing, but still sizeable, output gap. This target meant that the growth envisioned was relatively small in comparison to the fiscal costs involved. The aggressive fiscal policy that the United States undertook had been warranted due to exceptional circumstances, but it aided in exposing the shortcomings of discretionary fiscal policy during times of more 'normal' fluctuations

(Blanchard *et al.*, 2010: 206). This was clearly evident in early August 2011 when the United States came very close to a potentially devastating sovereign debt default. The United States Congress faced a stand-off where the Republicans and the Democrats convened, delaying the enactment of an emergency austerity bill to increase their US$14.3 trillion debt limit by US$2.4 trillion in order to avoid default. Given the fiscal uncertainty during at the time, the United States' outlook was weighed down by greater downside risks, renewed financial stress, a weakened housing market and restrained business and consumer sentiment. The priority at this time for the U.S. government was to put in place a credible medium-term fiscal policy agenda that showed a clear path to bring the U.S. public debt back to a sustainable level, while supporting short-term recovery efforts (IMF, 2011b: 74).

In order to put the United States on a sustainable fiscal path, measures need to be taken to ensure that fiscal deficits were brought under control while pursuing investments that promote economic growth. Blanchard *et al.* (2010: 212) point out that the crisis has taught the U.S. that the target debt levels should be less than those existing before the crisis. Prasad (2010: 386) noted that a well-articulated plan to restore fiscal stability was essential. If the job market continued to improve and bolster consumption levels, as it had to some extent, the growth of the U.S. economy would strengthen and ultimately provide a sustainable path to full recovery. Blanchard *et al.* (2010: 206) mention that if economic growth improved substantially, it should be used to reduce debt/GDP ratios rather than fund further stimulus packages. *Graph 3* provides evidence of the depressed GDP growth rate faced during the crisis, while providing a forecast of the improving, but still relatively weak, economic growth figures in the medium-term.

Graph 3

U.S. Real GDP
(Annual % Change)



Source: IMF (2012a)

With this in mind, the latter part of 2011 and beginning of 2012 saw a concerted effort by the United States government to reduce the fiscal deficit through the stringent control of discretionary spending and further consolidation efforts. In the long-run, debt-related challenges still remain large for the United States as substantial adjustment over the next decade needs to be undertaken so as to bring debt to GDP ratios in line with sustainable levels. This point is emphasized when considering *Graph 2*, where the general government gross debt level is expected to double from 2007 to 2015. The United States needs credible medium and long-term strategies that include entitlement reforms and spending cuts as a central focus, addressing the growth of age-related spending and issues surrounding revenue measures (IMF, 2012a: 24). The automatic spending cuts resulting from the failure of Congress to agree on consolidation efforts in 2011 is not an acceptable medium-term plan. These efforts need to be revised, adjusted, and enforced so as to ensure the United States continues towards a path of fiscal responsibility. In regard to this, Auerbach (2011: 5) believes that the difficulties faced by the U.S. (in realigning debt/GDP ratios with sustainable measures) are greatly influenced by the various demographic factors that will become more relevant in the next decade. These demographic factors include expenditure on old age pensions, medical aid, and disability pensions.

3.1.1.1 *Government Expenditure, Revenue, and the Overall Fiscal Balance*

According to the figures given by the IMF (2012a), the United States was in a deficit at the start of the crisis in 2007, with the fiscal deficit standing at 2.7% of GDP for the year. An increase in the deficit to 6.7% of GDP in 2008 can be attributed to the general government expenditure of 39.2% of GDP exceeding the general government revenue of 32.5%. In 2009, the growing government expenditure of 44% of GDP, combined with the decline in general government revenue to 30.9% of GDP; the growing output gap meant that the fiscal deficit grew to 13% of GDP. This was the largest the deficit had been for some time, and reflected the stimulatory pressures faced by the United States government at the time. In 2010 the budget deficit dropped to 10.5% of GDP, with a slightly improved output gap combined with general government expenditure and general government revenue standing on 42.1% and 31.7% of GDP respectively. The 2011 fiscal deficit, however, improved slightly from the previous year to 9.6% of GDP, while the general government expenditure for the same year was 41.4% of GDP with general government revenue remaining steady at 31.8% of GDP. The fiscal deficit is expected to decline by 1.5% of GDP in headline terms and 1.25% of GDP in cyclically adjusted terms over the 2012 period. This is with further consolidation efforts in the pipeline for 2013 (IMF, 2012a: 1). The United States is projected to have an overall fiscal balance of -8.1% of GDP in 2012 and -6.3% in 2013. The cyclically adjusted balance stands at -7.2%, -5.9%, and -4.4% of GDP in 2011, 2012, and 2013 respectively. In the long-run, the fiscal balance is forecast to improve significantly from a deficit in 2015 of -2.2% of GDP to a much more sustainable level of -1.6% of GDP in 2017 (IMF, 2012a: 62). *Table 1* provides a summary of the U.S. expenditure and revenue figures as well as the overall fiscal balance.

Table 1: U.S. Government Revenue, Expenditure, and General Fiscal Balance

(Percent of GDP)

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
General Government Balance	-2.0	-2.7	-6.7	-13.0	-10.5	-9.6	-8.1	-6.3	-4.9	-4.4
General Government Cyclically Adjusted Overall Balance	-2.4	-2.8	-5.0	-7.5	-7.8	-7.2	-5.9	-4.4	-3.4	-3.4
General Government Expenditure	35.9	36.7	39.2	44.0	42.1	41.4	40.0	39.2	38.6	38.5
General Government Revenue	33.8	33.9	32.5	30.9	31.7	31.8	31.9	32.9	33.7	34.1

Source: IMF (2012a)

3.1.1.2 *Government Debt Levels and the Growth Rate*

With a -0.3% change in GDP and output from the previous year, 2008 was a tough year in terms of economic growth for the United States (IMF, 2012b: 191). The general government gross debt figure for 2008 grew to 76.1% of GDP, an increase from the previous year's figure of 67.2%. While 2009 saw the United States face troubles with market liquidity, a rising output gap, and greater debt obligations, GDP growth proved to be of no assistance. The annual percentage change in GDP stood at -3.5%; reflecting the difficulty faced by policy makers during this period.

Table 2: U.S. Real GDP Growth Rate and General Debt Levels

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Real GDP *(Annual % change)*	2.7	1.9	-0.3	-3.5	3.0	1.7	2.1	2.4	2.9	3.3
General Government Gross Debt *(% of GDP)*	66.6	67.2	76.1	89.9	98.5	102.9	106.6	110.2	111.9	112.5
General Government Net Debt *(% of GDP)*	48.5	48.2	53.7	65.9	73.1	80.3	83.7	86.7	88.0	88.3

Source: IMF (2012a)

Table 2 provides evidence for this, highlighting the point that 2008 and 2009 were the only recent years that showed negative growth rates. This coincides with the general government gross debt for 2009 rising to 79.9% of GDP. Following the implementation of ARRA, the U.S. economy made a positive turnaround in 2010. The fiscal relief efforts, combined with infrastructure projects, tax cuts, and other direct assistance had the effect of bringing economic growth onto a positive path (U.S. Government, 2010: 9). The annual percentage change in GDP for 2010 rose to 3%, the first positive growth figure since 2007. This was accompanied by the general government gross debt level rising to 98.5% of GDP, a reflection of the increased pressure due to maturing debt. The gross financing need for 2010 stood at 32.2% of GDP, with maturing debt making up a large proportion of this at approximately 21% of GDP (IMF, 2010: 21). U.S. economic activity slowed in 2011 from an annual rate of 2.75% in the second half of 2010 to 1% in the first half of 2011 (IMF, 2011b: 73). With additional pressure from high market volatility, deterioration in household and business confidence, and prolonged job recovery it was inevitable that economic activity would be sluggish. The evidence of a slow-down in the U.S. economy was illustrated by the change in GDP for the year averaging at 1.7%, combined with the sustained output gap keeping inflation in check. The general gross government debt increased to 102.9% of GDP. With a maturing debt figure of 17.6% of GDP added to the fiscal deficit, the total financing need for the U.S. in 2011 stood at 27.3% of GDP.

Economic growth forecasts of 2.1% and 2.4% in 2012 and 2013, respectively, are a reflection of ongoing weakness in the labour markets, undermined housing prices, and continued deleveraging pressures (IMF, 2012b: 57). With the projected 2012 maturing debt figure rising to 17.7% of GDP, the total financing need for 2012 accumulates to 25.8% of GDP, slightly less than the 2013 projected financing need of 26.2% of GDP, with maturing debt for the same year increasing to 19.9% of GDP. The 2014 year seems to improve slightly with a total financing need of 25% of GDP; this is due to the budget deficit declining to 4.9% and maturing debt rising to 20.1% of GDP (IMF, 2012a: 3). General government gross debt is, however, forecast to rise from 106.6% of GDP in 2012 to 113% of GDP in 2017, emphasizing the increase in medium-term debt. With current policies, estimates see a rise in federal debt held by the public reaching 90% of GDP by 2020 (IMF, 2012b: 58).

3.1.2 *The Euro-Zone Case*

The European Union (EU) has been plagued by two interrelated crises. Firstly, a banking crisis emanating from losses in capital market securities and bursting property market bubbles in some European countries, and secondly a sovereign debt crisis aggravated by recessionary pressures, poor fiscal management, and transfers for banking aid (Blundel-Wignall and Slovik, 2011: 2). The widening bond spreads in Portugal, Ireland, Italy, Greece, and Spain (PIIGS) illustrate the effect of these combined

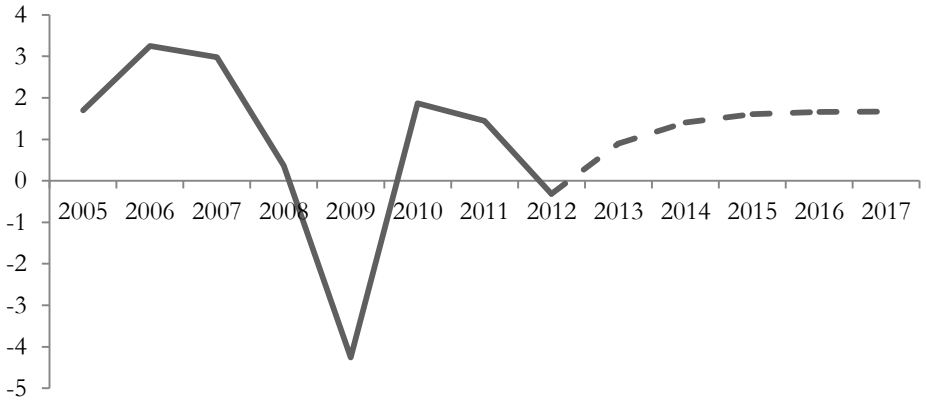
pressures in Europe's more fragile economies. The ever-present possibility of sovereign default in certain countries within the EU has been a source of concern for policy-makers and the public.

After the widespread panic in September 2008, European banks were adversely affected due to their exposure to the US financial markets. Following the decision by the United Kingdom government to recapitalize eight of the country's banks, an agreement was reached between the countries of the Euro-zone to inject further capital into distressed banks and stimulate the banking system by providing guarantees for interbank loans (Naude, 2009: 3). The agreement was finalized on the 8th of October 2008 with a total cost of US$1.3 trillion at a cost to EU tax payers. During this period, the European Commission advocated a 200 billion Euro fiscal stimulus plan in the hope of encouraging and stimulating European competitiveness through employment and entrepreneurship. *Graph 4* illustrates the sharp decline in economic growth from 2007, highlighting the need for such stimulatory measures. This did, however, have an impact on gross debt levels during this period, with the gross debt level for the Euro-zone increasing by approximately 20% of GDP over the following three years (as seen in *Graph 5).*

Graph 4

Euro-Zone Real GDP

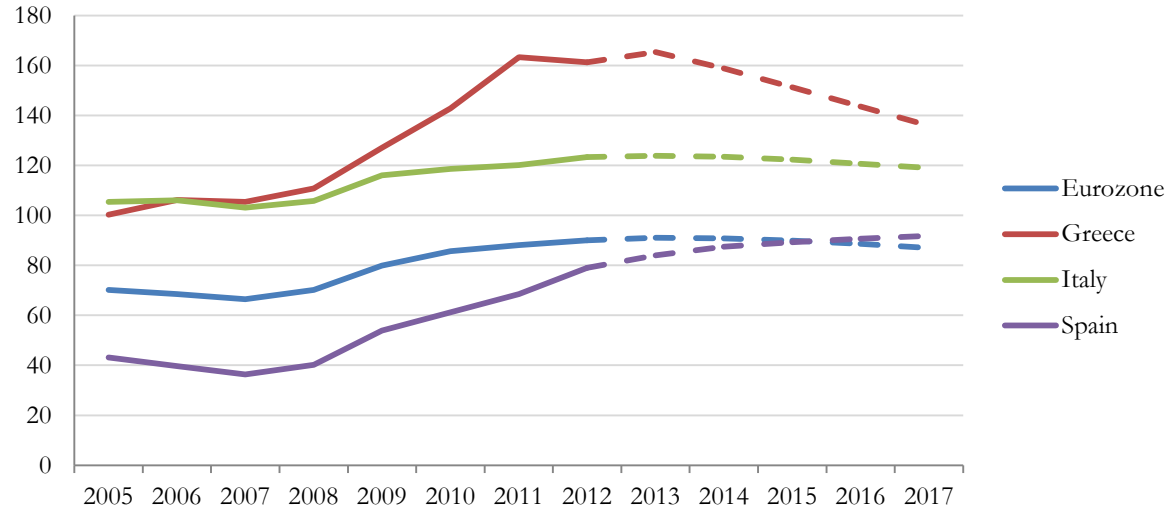
(Annual % Change)



Source: IMF (2012b)

Graph 5

Euro-zone General Government Gross Debt
(Percentage of GDP)



Source: IMF (2012a)

Roubini (2010: 34) emphasizes that the current turmoil faced by Greece, Portugal, Italy, Ireland, and Spain are just the next stage of the financial crisis. Fiscal negligence, combined with the socialization of private losses, has led to a precarious build-up of public deficits and debt in these countries. Milesi-Ferretti and Tille (2011) go into more detail by citing the lack of cross-border financial flows (due to the 2008 financial shock) as a cause for greater debt levels, with investors reassessing their international exposure and investing in their home markets. This disproportionately affected countries that had a greater reliance on external funding - especially funding from international short-term debt markets. The sovereign debt markets in the Euro area were relatively calm through 2008 and a large part of 2009. In the latter part of 2009, however, a number of EU countries reported larger-than-expected deficit/GDP ratios (Lane, 2012: 56). One such example was a revised budget deficit target of 12.7% of GDP by the new Greek government, which was more than twice the size of the previous 6% target. A result of this saw the level of government gross debt rising from 127% in 2009 to a peak of 163% of GDP in 2011, as illustrated in *Graph* 5.

Germany, France, and Italy have all made steps towards medium-term fiscal consolidation in accordance with the Stability and Growth Pact (SGP) which the EU members signed in 1997 (IMF, 2010: 38). At the end of 2010 Germany had contravened the limits of the SGP with a fiscal balance (as a percentage of GDP) of -4.3%. Italy, Spain, Portugal, and France were just a few of the countries that had also surpassed the -3% limit set by the European Commission. While Germany has based its consolidation plans around changes in expenditure, France has set up plans to transform fiscal deficits through a mixture of expenditure and revenue measures as well as structural reforms. Although countries within the EU have made concerted efforts to adhere to the criteria of the SGP, the agreement has been criticized due to its

lack of rigidity and the inconsistencies of enforcement throughout the EU. Lane (2012: 51) notes that the SGP also outlined a limit for the stock of public debt that would not surpass 60% of GDP with the addition of a "no bailout" rule; both of which have been breached since the crisis began.

In May 2010 Greece was the first country to be shut out of the bond market, with Ireland, Portugal, and Spain following suit. Each of the bailouts was established on condition that the recipient countries implemented fiscal austerity measures and reforms to structurally improve economic growth (Lane, 2012: 57). As Hallerberg (2011: 130) notes, the European Central Bank can provide any economy within the EU emergency liquidity when needed. This, although somewhat controversial, had allowed countries like Greece to become fiscally irresponsible. On the 24th and 25th of March 2011 the European Council sanctioned several reforms directed at coordinating policy actions within the EU (IMF, 2011a: 60). These reforms hope to encourage fiscal responsibility and prevent further pressures due to sovereign debt.

3.1.2.1 *Government Expenditure, Revenue, and the Overall Fiscal Balance*

This countercyclical fiscal expansion saw the Euro-zone fiscal balance (as a percent of GDP) worsen from -0.6% at the end of 2007 to -2.1% at the end of 2008, and eventually peak at -6.4% at the end of 2009 (IMF, 2011a: 3). *Table 3* identifies the fiscal balances recorded, and projected, from 2006 to 2015.

Table 3: Euro Area Fiscal Balance *(Percentage of GDP)*

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Euro-Zone	-1.3	-0.7	-2.1	-6.4	-6.2	-4.1	-3.2	-2.7	-2.2	-1.8
Germany	-1.6	0.2	-0.1	-3.2	-4.3	-1.0	-0.8	-0.6	-0.3	-0.2
France	-2.4	-2.7	-3.3	-7.6	-7.1	-5.3	-4.6	-3.9	-3.1	-2.2
Portugal	-4.1	-3.2	-3.7	-10.2	-9.8	-4.0	-4.5	-3.0	-2.3	-1.9
Ireland	2.9	0.1	-7.3	-14.2	-31.3	-9.9	-8.5	-7.4	-4.9	-2.9
Italy	-3.3	-1.5	-2..7	-5.4	-4.5	-3.9	-2.4	-1.5	-1.6	-1.5
Greece	-6.0	-6.7	-9.7	-15.6	-10.6	-9.2	-7.2	-4.6	-2.1	-1.6
Spain	2.0	1.9	-4.2	-11.2	-9.3	-8.5	-6.0	-5.7	-5.2	-4.8

Source: IMF (2012a)

The effects of the 2008 financial shock are widely evident across the European economies; increases in fiscal deficits were recorded between 2008 and 2009. According to the IMF (2012a), Greece recorded a peak in its fiscal deficit in 2009 of 15.6% of GDP, while Italy, Portugal, and Spain also peaked with deficits of 5.4%, 10.2%, and 11.2% of GDP respectively. The reason behind these extreme figures was

the underlying financial and macroeconomic imbalances across the Euro-zone, even though the initial blame was placed on the fiscal irresponsibility of the peripheral nations in the EU (Lane, 2012: 56). As *Graph 6* emphasizes, it was clear that government expenditure across the EU started to exceed government revenue at the time. A sharp increase in Euro-zone government expenditure between 2008 and 2009 left the EU in a precarious position. Ireland's fiscal balance increased from -14.2% to -31.3% of GDP between 2009 and 2010, and the country was in need of a bailout package that would bring their fiscal deficit in line with sustainable levels. The bailout and austerity measures brought the Irish fiscal deficit figure down to a much more sustainable figure of 9.9% GDP in 2011. According to the IMF (2011a: 5) the overall deficit in the Euro-zone over 2011 period fell sharply. This was due to the withdrawal of fiscal stimulus combined with the lower impact of automatic stabilizers. With Germany embarking on a tax-base widening, wage-bill freezes in Italy, pension reforms in France, and expenditure cuts combined with greater Value-Added Tax (VAT) in Spain, a significant reduction in deficits was expected during the year (IMF, 2011a: 5). Greece, Portugal, and Ireland have made further consolidation plans to enhance their credibility in a time where their reliability and fiscal soundness has been questioned. In the medium-term, fiscal deficits across the Euro-zone are expected to realign with sustainable levels and fall within the 3% of GDP guideline set out in the SGP. By 2015, it is expected that Portugal, Ireland, Italy, and Greece will all have a fiscal deficit of less than 3% of GDP, with Spain being the only outlier from the PIIGS at 4.8% of GDP.

3.1.2.2 *Government Debt Levels and the Growth Rate*

The Euro-zone has been faced with many challenges since the initial financial shock in the United States, especially in the form of greater debt/GDP ratios. It can be seen in *Table 4* (overleaf) that the annual growth rate in the Euro-zone slowed from 3% in 2007 to 0.4% in 2008, and eventually to -4.3% in 2009 (IMF, 2012a). The same year saw German real GDP contract by 5.1% from the previous year, while Italy also posted a large contraction of 5.5% from 2008. Ireland was another economy that showed difficulty in maintaining economic growth; the annual change in real GDP figures contracted from a positive 5.2% in 2007 to -3% in 2008, with a further contraction to -7% in 2009. The negative growth figures across all the Euro-zone countries placed pressure on debt/GDP ratios (*Table 5, overleaf*) as these started to increase from 2009 onwards. The IMF (2012a) provide projected gross debt levels, as a percentage of GDP, for 2012 that have risen to 88.1% for the Euro-zone as a whole; 86.3% for France; 120.1% for Italy; and 163.3% for Greece.

Table 4: Euro Area Real GDP *(Annual % change)*

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Euro-Zone	3.3	3.0	0.4	-4.3	1.9	1.4	-0.3	0.9	1.4	1.6
Germany	3.9	3.4	0.8	-5.1	3.6	3.1	0.6	1.5	1.3	1.3
France	2.7	2.2	-0.2	-2.6	1.4	1.7	0.5	1.0	1.9	1.9
Portugal	1.4	2.4	0.0	-2.9	1.4	-1.5	-3.3	0.3	2.1	1.9
Ireland	5.3	5.2	-3.0	-7.0	-0.4	0.7	0.5	2.0	2.5	2.8
Italy	2.2	1.7	-1.2	-5.5	1.8	0.4	-1.9	-0.3	0.5	1.0
Greece	4.6	3.0	-0.1	-3.3	-3.5	-6.9	-4.7	0.0	2.5	3.1
Spain	4.0	3.5	0.9	-3.7	-0.1	0.7	-1.8	0.1	1.2	1.6

Source: IMF (2012a)

Table 5: Euro Area General Government Gross Debt *(Percentage of GDP)*

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Euro-Zone	70.2	68.6	66.4	70.2	79.9	85.7	88.1	90.0	91.0	90.8
Germany	68.5	67.9	65.2	66.7	74.4	83.2	81.5	78.9	77.4	75.8
France	66.7	63.9	64.2	68.3	79.0	82.4	86.3	89.0	90.8	90.6
Portugal	62.5	63.7	68.3	71.6	83.1	93.4	106.8	112.4	115.3	114.4
Ireland	27.1	24.7	24.8	44.2	65.2	92.5	105.0	113.1	117.7	117.5
Italy	105.4	106.1	103.1	105.8	116.1	118.7	120.1	123.4	123.8	123.4
Greece	100.3	106.1	105.4	110.7	127.1	142.8	163.3	161.2	165.3	158.8
Spain	43.2	39.7	36.3	40.2	53.9	61.2	68.5	79.0	84.0	87.4

Source: IMF (2012a)

As Blundel-Wignall and Slovik (2011: 7) note, a country's public debt will continually increase (as a percentage of GDP), making it unsustainable, whenever the primary budget surplus (as a percentage of GDP) does not offset the burden of debt service when the economy grows. This seems to provide an accurate summation of the problem that the Euro-zone has been faced with during the sovereign debt crisis. While the long-term debt/GDP ratios for these countries are projected to improve, there are associated difficulties. Lane (2012: 61) describes the factors that make this adjustment difficult. Firstly,

growth in nominal GDP is likely to be low in the Euro-zone as GDP growth rates in high-income countries are much stickier than in emerging economies. Secondly, the political economy provides a potential challenge as the highly indebted countries need to be led by a government that has long-term fiscal prudence; enacting spending cuts and tax increases without any short-term digression or fiscal respite. Thirdly, the risk premia for these countries will remain elevated as the private sector will not see them as risk-free countries following large losses experienced during the crisis. Overall, there are significant challenges that the Euro-zone need to address in the medium-term if debt/GDP ratios are to become sustainable again. With this in mind, the IMF (2012a) projects that the Euro-zone will reach a gross debt level, as a percentage of GDP, of 90.8% in 2015; far greater than any figure in the previous ten years.

3.1.3 *The South African Case*

The financial crisis that originated in the United States and spilled over into other advanced economies had left many African countries relatively unaffected. South Africa was an exception, with the lagged effects of the crisis causing setbacks in growth momentum and development gains (Devarajan and Kasekende, 2011: 421). South Africa, as a middle-income economy, relies heavily on the trade and financial ties it has with Europe (IMF, 2012b: 73). This meant that South Africa was directly affected as business confidence and growth slowed in Europe. However, given the stringent financial regulations, the banking sector in South Africa was spared a much deeper period of turmoil. Other aspects that provided some support for South Africa were the increasingly prudent and stable fiscal policies, combined with debt relief, building up to the crisis. This provided South Africa with the fiscal space necessary to use stimulatory measures as an aid in boosting growth when it was needed most. In light of this fiscal space, Devarajan and Kasekende (2011: 432) point out that the South African government adopted a countercyclical fiscal stimulus amounting to R787 billion for public investment during the 2010 to 2012 period.

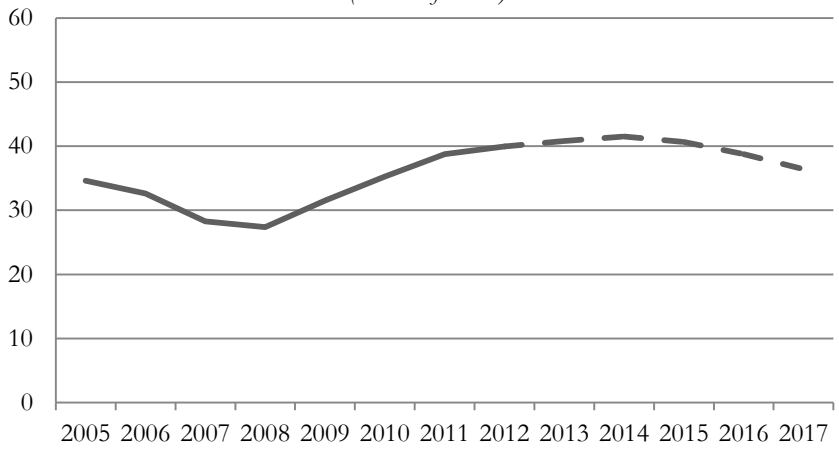
Du Plessis and Boshoff (2007: 5) highlight the point that, from 1999 up to the crisis, South Africa experienced remarkable stabilization and that this decade had been characterized by steady growth, stable fiscal deficits, and sustainable debt levels. Siebrits and Calitz (2004), Du Plessis and Boshoff (2007), and Jooste and Marinkov (2012) all agree that this was partially due to the Public Finance and Management Act of 1999, which calls for sound expenditure controls and a system of supervision, and so emphasizing reforms in fiscal consolidation. Burger *et al.* (2011: 5) note that South Africa, through the Growth, Employment and Redistribution (GEAR) policy, sought to reduce the conventional budget deficit/GDP ratio to below 3% per year. As better tax administration and improved economic growth directly benefited growth in government revenue, a small budget surplus was recorded in 2006 and 2007. *Graph 7* illustrates the decrease in government debt, with 2008 recording a significantly low level of gross debt at

27.4% of GDP (IMF, 2012b). In response to the recessionary pressures of 2008/2009 South Africa started to run larger fiscal deficits to provide countercyclical fiscal stimulus, which saw the level of debt begin to increase once again. As the exit from the fiscal stimulus is to take place gradually, debt levels will continue to increase over the next few years, reaching a level of above 40% of GDP in 2013 (*Graph 8*). Jooste and Marinkov (2012: 15) note that, if South Africa were to maintain its current fiscal deficit, or reduce it at a very slow rate, the levels of government debt and the related servicing costs will continue increasing. For this reason, Jooste and Marinkov (2012) believe a gradual reduction in the fiscal deficit is the ideal response, as opposed to any extreme measures to reduce the deficit or leave it as it stands.

Graph 7

South African General Government Gross Debt

(Percent of GDP)

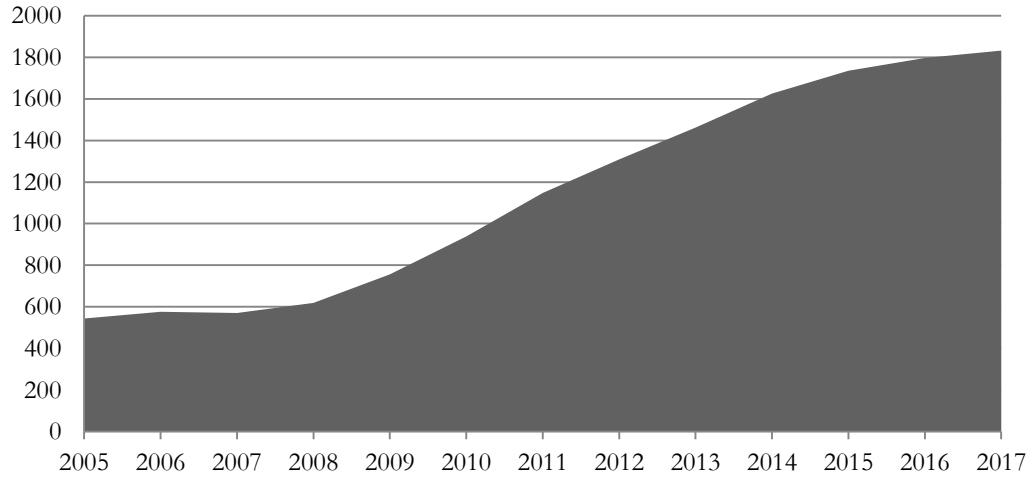


Source: IMF (2012a)

Graph 8

South African General Government Gross Debt

(Billions of South African Rands)



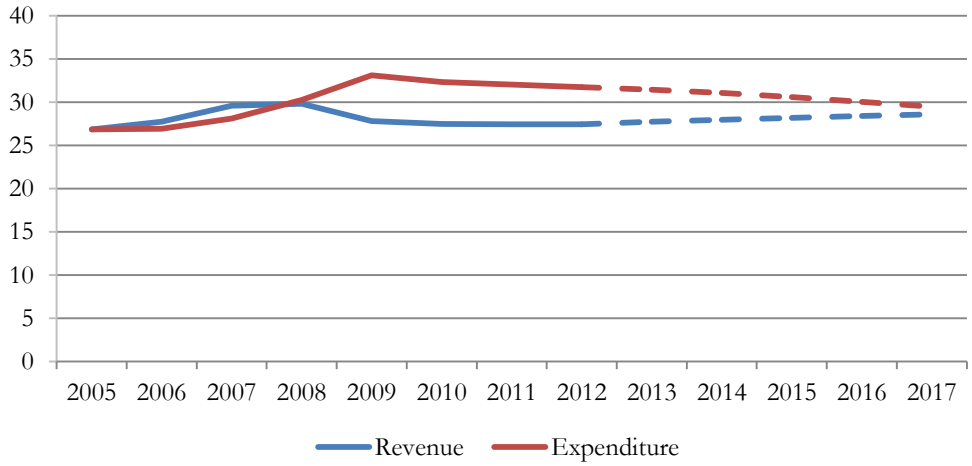
Source: IMF (2012a)

3.1.3.1 *Government Expenditure, Revenue, and the Overall Fiscal Balance*

As previously mentioned, the South African government implemented GEAR in 1996, a macroeconomic strategy that had very specific fiscal objectives. One such objective was the reduction of the conventional deficit to less than 3% in four years as well as the maintenance of a 25% of GDP government revenue ceiling (Du Plessis and Boshoff, 2012: 7). The level of government revenue did not breach the 25% barrier until 2005 and has continued to rise since then, reaching a peak of 29.8% of GDP in 2008 (*Table 6*). Since then general government revenue has been projected to come down to 27.5% in 2012, increasing slightly to 28.2% of GDP by 2015 (IMF, 2012b). With government revenue remaining relatively steady over the next three years, it is the reduction of government expenditure that will realign the overall fiscal balance with the now old, but still relevant, deficit target set out in GEAR of less than 3%. *Graph 9* illustrates the divergence of government expenditure in 2009, where an observed peak of 33.1% of GDP is expected to be brought back down to 30.6% of GDP by 2015.

Graph 9

South African Government Expenditure vs. Government Revenue
(Percent of GDP)



Source: IMF (2012a)

South Africa recorded a general balance surplus in 2006 and 2007. *Table 6* identifies these relatively small surpluses of 0.8% and 1.5% of GDP respectively. When South Africa started to run larger fiscal deficits (aimed at providing a countercyclical fiscal stimulus), the initial deficit in 2008 stood at 0.5% of GDP and grew to its highest level of 5.3% of GDP in 2009. The deficit then started falling, reaching -4.8% of GDP in 2010 and -4.6% of GDP in 2011 (IMF, 2012b). As South Africa exits from the fiscal stimulus, and the crisis as a whole, the fiscal deficit is projected to fall to levels recorded before the brief period of fiscal

surplus in 2006/2007. The 2015 fiscal year is projected to see the deficit fall within the -3% level with a projection of -2.4% of GDP.

Table 6: South African Government Revenue, Expenditure, and General Fiscal Balance

(Percent of GDP)

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
General Government Balance	0.8	1.5	-0.5	-5.3	-4.8	-4.6	-4.3	-3.7	-3.1	-2.4
General Government Cyclically Adjusted Overall Balance	-0.1	-0.2	-2.3	-5.1	-4.5	-4.2	-3.7	-3.2	-2.9	-2.4
General Government Expenditure	26.9	28.1	30.3	33.1	32.3	32.0	31.7	31.4	31.1	30.6
General Government Revenue	27.7	29.6	29.8	27.8	27.5	27.4	27.5	27.7	28.0	28.2

Source: IMF (2012a)

3.1.2.2 *Government Debt Levels and the Growth Rate*

As the IMF (2012b: 73) notes, the South African economy is more exposed to weaknesses in the world economy than other African countries. For this reason it is understandable that growth levels were greatly affected in 2008 and 2009. As a middle-income, emerging economy South Africa has had the benefit of relatively large real GDP growth rates in the past. As illustrated in *Table 7* and *Graph 10(overleaf),* South Africa enjoyed pre-crisis annual growth rates of above 5% (IMF, 2012b: 197). This was soon to change as the real GDP growth rate dropped to 3.6% in 2008 and to -1.5% in 2009; South Africa was now faced with sub-par growth rates and high employment, creating concern for the economy (IMF, 2012b: 74).

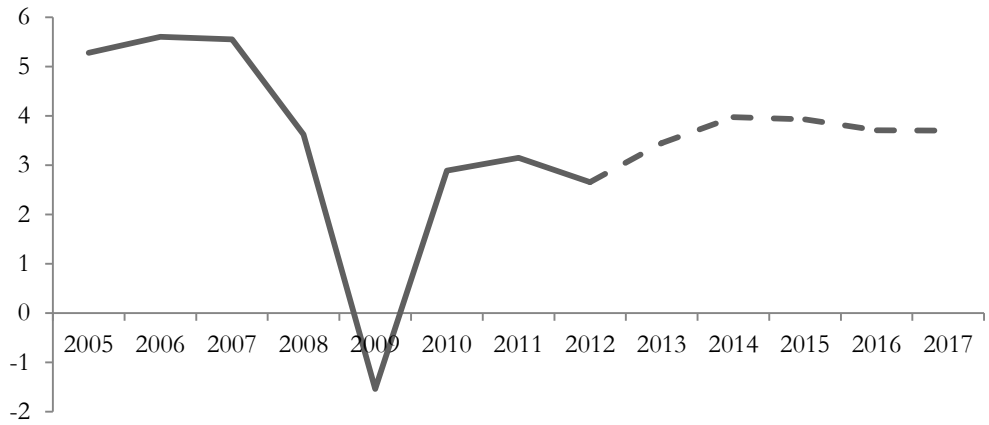
Table 7: South African Real GDP Growth Rate and General Debt Levels

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Real GDP *(Annual % change)*	5.6	5.5	3.6	-1.5	2.9	3.1	2.7	3.4	4.0	3.9
General Government Gross Debt *(% of GDP)*	32.6	28.3	27.4	31.5	35.3	38.8	40.0	40.8	41.5	40.7
General Government Net Debt *(% of GDP)*	29.7	24.8	23.4	27.4	31.3	35.1	36.2	37.6	38.8	38.3

Source: IMF (2012a)

Graph 10

South African Real GDP
(Annual % Change)

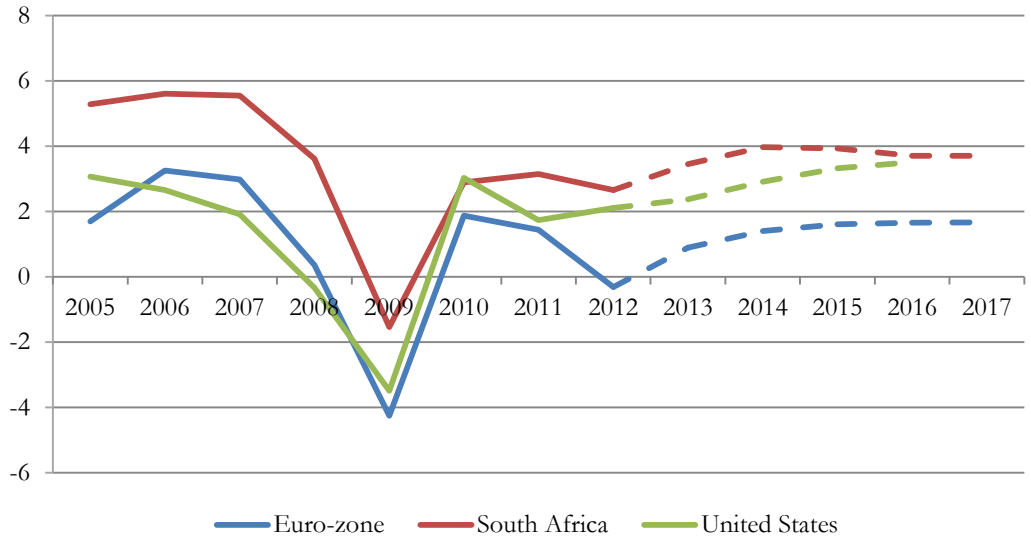


Source: IMF (2012b)

Graph 11 compares the growth rates of the United States, the Euro-zone, and South Africa, indicating the h rates of growth recorded by South Africa. This reiterates the potential for growth that South Africa has due to its developmental nature. The 2012 year is projected to see a slight decline in growth levels, once again due to South Africa's exposure to the European markets. These growth rates are projected to pick up by 2014 and 2015 to an annual rate of around 4%.

Graph 11

Real GDP
(Annual % Change)



Source: IMF (2012b)

This countercyclical stimulatory policy embarked upon during the 2010 to 2012 period meant that government debt as a proportion of GDP would increase accordingly. With a low gross debt level of 27.4% of GDP in 2008, an increase was recorded by the end of 2009 with debt reaching 31.5% of GDP. With the impetus from the stimulus package, gross debt increased from 35.3% in 2010 to 40% of GDP in 2012 (IMF, 2012a). It is this level of debt that the country is expected to maintain over the next three years, with a gross debt level of 40.7% of GDP (*Table 7)* projected for 2015. This is, nevertheless, considerably lower than most of the European economies and that of the United States; South African debt dynamics remain sustainable in the medium and long-term. South Africa, with a budget deficit of 4.3% and maturing debt at 1.9% of GDP, will have a total financing need of 6.2% of GDP for 2012 and 6% of GDP for 2013 (IMF, 2012a: 6). This is in contrast to the United States with a total financing need of 25.8% and 26.2% of GDP in 2012 and 2013.

Jooste and Marinkov (2012: 6) discuss the sustainability of debt and mention that any alteration in the fiscal policy stance would alter the level of public debt. With greater fiscal deficits comes an increase in the stock of debt, as well as an increase in the costs of servicing this debt. It is also noted that accruing debt for investment purposes has the potential to improve long-run growth prospects. As Burger *et al.* (2011: 23) point out, South Africa is not in any position at the moment, nor will be in the near future, where it is likely that public debt will become too high and threaten debt sustainability. As Gordhan (S.A. Government, 2012: 8) highlights (during the national budget speech), debt sustainability and intergenerational equity are two key fiscal focus areas for South Africa. Taking all this into account, it raises the question of whether or not the country can adopt further stimulatory fiscal measures, with a

simultaneous increase in the level of debt, to improve its long-term growth potential in a sustainable manner without creating an excessive burden on future generations.

4. DEBT AND INTERGENERATIONAL EQUITY

Discretionary fiscal policy has been discussed in a general manner, touching on its relevance during a recessionary period and providing evidence of such policy measures during the recent crisis. This section seeks to provide an insight into the functioning of fiscal policy when the economy is faced with an output gap, and where monetary policy has become an ineffective tool in stimulating aggregate demand. Buiter and Grafe (2002: 50) mention that the ability for a government to smooth budgetary spending across generations does depend greatly on the demographic structure of the country and its views on intergenerational equity. The typical scenario where government would utilize fiscal stimulus measures is discussed first, and then the effects of such a policy are discussed in light of a two-period model. The central question considered is whether or not a debt-financed fiscal stimulus, undertaken presently, is detrimental to future generations. Gordhan discusses in the national budget speech that, through the medium-term phasing in of fiscal consolidation, South Africa will not create any excess debt burden for future generations and the economy in general (S.A. Government, 2012: 9). For this reason, in search of evidence to verify this statement, the South African case is explicitly considered.

4.1 *Conditions for an Expansionary Fiscal Stimulus*

In order for an expansionary fiscal policy to be warranted there are certain conditions that need to be met. Buiter (2010) expands on the case for internationally coordinated fiscal stimulus, citing the conditions that need to be satisfied:

Firstly, Buiter (2010: 48) points out that there need to be idle resources; involuntary unemployment and unwanted excess capacity. This means that output and employment are effectively constrained by demand. Okun *et al.* (1970) highlight that, when the economy is at full employment, fiscal policy has the potential to become excessively stimulatory resulting in high inflationary pressure as was seen during the build-up to the Vietnam War. In accordance, Elmendorf and Furman (2008: 10) argue that if a stimulus is undertaken unnecessarily, the resulting effects could be over-expansion and increased inflation.

Secondly, monetary policy as a stimulatory tool must be ineffective in boosting demand and a fiscal stimulus would be the most effective option left. Mishkin (2011: 28), although a strong advocate of monetary policy and proponent of its effectiveness during recessionary periods, admits that the limitations and problems associated with monetary policy when the "zero-lower-bound-problem" arises is a serious issue that leaves monetary policy ineffective.

Thirdly, interest rates must not be driven up by an expansionary fiscal policy to the extent where the stimulus itself is rendered powerless due to financial crowding out. Friedman (1978: 597) argues that, even when the economy is below full employment, there is still potential for interest rates to increase enough to mitigate investment spending and essentially cause the stimulus to become ineffective.

Fourthly, direct crowding out must not defuse the expansionary fiscal policy at given interest rates. Buiter (2010: 48) describes this phenomenon as the potential for private spending to be displaced by public spending, or public dissaving by private saving, at present and future interest rates. The high degree of substitutability between private and public consumption and expenditure can often lead to the failure of an increase in public spending on real goods and services to boost aggregate demand.

Lastly, decentralized, uncoordinated national fiscal expansionary policies could become suboptimal due to the existence of cross-border externalities. Hebous and Zimmermann (2012: 17) argue that, during crises, a fiscal consolidation shock has a less pronounced effect; the fiscal policies of foreign countries do have a significant effect on economic activity due to the existence of cross-border externalities.

Corden (2010: 38) is in agreement and backs this up by briefly outlining a typical scenario where a debt-financed fiscal stimulus may be used by government. To start, the economy is faced with an output gap where actual output is below potential output. Aggregate demand would be insufficient, interest rates would be very low, and monetary policy would be ineffective on its own. In this scenario, a fiscal stimulus would be the only option left to eliminate or reduce the output gap. Corden (2010: 38) highlights the point that the USA and Britain were in a similar scenario in 2009, where monetary policy became incapable of stimulating the economy on its own.

4.2 *Overlapping Generations Model and the 'Conservative Allegation'*

To properly consider the effects of a current debt-financed fiscal stimulus, the present implications as well the effects on future generations need to be taken into account. Barrel and Weale (2010: 91) use an Overlapping-Generations (OLG) Model in its simplest form to describe the scenario surrounding such a fiscal stimulus. This is a slight variation of the overlapping-generations model described by Barro (1974: 1098), which was in turn based on work done by Samuelson (1958) and Diamond (1965). While Corden (2010: 40) avoids using the term OLG, he does refer to a two-period model in which 'Conservative Allegation' is set out. This proposal assumes (as do the others) that there are two periods. The first period is that where there was originally an output gap and a fiscal stimulus was used to raise output and incomes. The second period is 'the future' and embodies a period where output and incomes have recovered, whether due to fiscal stimuli or whether they recovered in the absence of any stimuli.

4.2.1 *Assumptions About the Stimulus and the Resulting Leakages*

Before these OLG models are discussed in greater detail, the assumptions must be clearly set out. This section highlights the Keynesian theory underlying the fiscal stimulus policy that has been undertaken, or at least considered, by many countries during the recent crisis. The stimulus and the resulting leakages are discussed under certain assumptions highlighted by Corden (2010):

a) The fiscal stimulus consists of public investment

The first assumption is that the debt-financed fiscal stimulus consists of government investment on infrastructure and other similar capital projects. Blanchard *et al.* (2008: 5) argue that such public spending has larger multiplier effects, and the initial results are far more certain, than a stimulus consisting of tax cuts. The public investment takes two forms, I_1 and I_2. Investment that yields a significant positive marginal social return is represented by I_1. Investment that does not yield any return, and to some degree can be regarded as useless expenditure, is represented by I_2. The latter form of investment is justified due to its potential to obtain votes or create employment. Corden (2010: 39) notes that the fiscal stimulus creates a budget deficit over and above the original deficit. Government bonds are sold in order to finance this deficit.

b) The presence of the Keynesian multiplier

Corden (2010: 39) argues that the stimulus increases demand for domestic private-sector output, raising incomes. This leads to further spending on domestic products, representing a typical case of the Keynesian multiplier. However, during each stage of the process, there are leakages from the stream of income; these include taxation, savings, and imports (Cwik and Wieland, 2009: 2). After the leakages, the remaining increase in income leads to further spending on domestic goods, consequently increasing income once again and eliminating a portion of the output gap at the same time. In the end, there is a final equilibrium where the sum of leakages is equal to the original injection into the income stream - the new budget deficit originating from the fiscal stimulus. The additional tax revenue raised reduces the financing need of the initial stimulus, which leaves the 'net' stimulus (Corden, 2010: 39). Opponents of fiscal stimulus measures, such as Barro (2009), argue that government spending will displace private consumption and investment.

c) Market-determined floating exchange rate; Zero international capital flows; Current account balance remains the same

Corden (2010: 39) assumes that the country in question has a market-determined floating exchange rate. This does complicate the analysis for members of the Eurozone, or for any country that maintains a fixed or managed exchange rate. However, there are many points made that do relate to these types of countries and are worth considering. Corden (2010: 39) also reasons that, despite the fiscal stimulus, net international capital flows are zero as result of the freely floating exchange. A freely-floating exchange rate would mean that the overall balance of payments remains in balance, but not necessarily any of the sub-accounts. For there to be no net international flows of capital the current account would have to balance by itself (without any official intervention). As Corden (2010: 39) notes, the fiscal expansion will lead to an increase in income and therefore imports, which in turn leads to a depreciation of the exchange rate. The depreciation leads to a simultaneous increase in exports and a decrease in imports. Corden's (2010) argument here is that, as income increases via each stage of the multiplier, the increased imports (induced by increased income) will be offset by increased exports following the resulting exchange rate

depreciation. Despite the multiplier, there is essentially no net effect on the balance of trade. As a result, a simple relationship is obtained where the total increase in savings is equal to the net stimulus that has to be financed.

d) Keynesian savings assumption

The savings discussed previously entails a typical Keynesian savings scenario where there is a positive, although not necessarily constant, marginal propensity to save. If the marginal propensity to save were zero, then the multiplier would be infinite and the demand created by the initial stimulus would theoretically expand indefinitely (Tobin, 1965: 675). Corden (2010: 40) adds to this by mentioning that the marginal propensity to save does not have to be constant, but it must be positive and should be below 100%.

4.2.2 *The 'Conservative Allegation'*

Barrel and Weale (2010: 91) use a simple OLG model to analyze the effects of fiscal policy on intergenerational equity. This can be related to the scenario surrounding fiscal policy as a debt-financed expansionary stimulus provides resources to those currently living in Period 1, while the costs are borne by future generations in Period 2. In this case, an OLG model is useful as it specifies that each generation works for one period only and then retires, with the accumulated savings used to live on in the second period. The form that savings take could include either holdings of productive capital or investment in public debt. Both forms provide the means to survive during retirement and are in this sense equivalent from the saver's point of view. However, this substitutability raises the potential problem of public debt crowding out productive capital (Barrel and Weale, 2010: 91). The simple OLG model described above resembles the two-period model that Corden (2010) proposes. The two-period model, according to Corden (2010: 40), is one that highlights the effects of a fiscal stimulus during a recession. Period 1 is the initial period where potential output is greater than actual output, hence the existence of an output gap. During this period an expansionary fiscal stimulus is undertaken so as to raise incomes and improve output. Period 2 is the 'future' period in which output and income levels have recovered, either due to previous fiscal stimuli or a natural recovery in the absence of any stimuli. This is in accord with both Kumhof *et al.* (2010: 5) and Benhabib *et al.* (2011: 128) who use a similar framework regarding fiscal policy and finitely-lived agents.

Within the context of these models the important question of the possible effects of a debt-financed stimulus for those living in Period 2 is raised. Corden (2010: 40) considers whether or not the people living in the second period would be adversely affected because of the fiscal stimulus practiced in the first period, terming this proposition the 'Conservative Allegation'. This question is asked in the light of a recession in Period 1, where a fiscal stimulus is seen as an appropriate means to stimulate the economy.

When considering the effects of taxation and taxpayers' liability only, the 'Allegation' seems to be correct as the people living in Period 2 are most certainly adversely affected by the additional tax burden created by the stimulus in Period 1, as highlighted by Buiter and Grafe (2002: 46). However, considering the assumptions previously discussed, the scenario is not as straightforward as it may seem. There are two factors that may be neglected when discussing the aforementioned 'Conservative Allegation'. Firstly, with the increase in incomes brought about by the stimulus there is an additional accumulation of assets. These assets, in the view of Corden (2010: 41), are equal in value to the government bonds issued to finance the stimulus, hence providing an exact offset to the liability created. Secondly, there is a possibility that part of the public investment undertaken in the first period is socially productive and takes the form of I_1. This means that this investment will be beneficial to those individuals living in Period 2 as well as fulfilling its function of stimulating the traditional Keynesian spending effect in Period 1. Overall, Corden (2010) argues as follows: Incomes and output increase in Period 1 (which is currently faced with a crisis) as a result of the fiscal stimulus. This leads to an increase in consumption and saving, benefiting people living in Period 1 and Period 2 respectively. However, the tax burden is borne by those living in Period 2. Given the assumptions previously discussed, the increased savings passed on from Period 1 to Period 2 exactly offset the increased tax liabilities passed on from the first to second period. To sum up this line of argument, those people living in Period 1 benefit from increased income, employment, and consumption in that period, while at the same time those living in Period 1 are not passing on any burden to those people who live in Period 2 (Corden, 2010: 41). Furthermore, depending on the extent to which the fiscal stimulus in Period 1 consists of investment of the type I_1, there is potential for the stimulus to benefit those living in Period 2 as well as Period 1.

This is the conclusion given for the scenario where, in response to a crisis, the outcome in Period 2 will differ to what Period 2 would have been like had there been no fiscal stimulus. Corden (2010: 41) admits that the results would be completely different, even detrimental to Period 2, when a fiscal expansion is embarked upon either in the absence of a crisis in Period 1 or where the spending undertaken is not productive. This is because of the unnecessary burden of public debt and increased taxation. Elmendorf and Furman (2008: 10) add to this by highlighting the resulting effects, for both periods, of over-expansion and higher inflation when a fiscal stimulus is taken unnecessarily. Followers of the Keynesian stimulus policies believe that policies aimed at reducing an output gap can often be ineffective due to the problems related to high levels of saving. These limitations and complications are discussed next.

4.2.3 *Limits and Complications*

In its simplest form the two-period model does seem to provide a reasonable perspective on the functioning of a debt-financed fiscal stimulus. However, there are complications and limitations

associated with such a model. The most relevant limitations are discussed, highlighting the restrictions and potential constraints associated with the model.

Barrel and Weale (2010: 91) focus on the limitations and discrepancies surrounding savings. Firstly, savings needs are determined by factors such as the length of retirement relative to the amount of years worked. This means that there is the possibility that capital might be accumulated in excess of that required. The unappealing prospect that capital accumulation may fall short of that required is, however, more conceivable. De la Croix and Michel (2002: 11) argue that the key mechanics of an OLG model are the decisions of young agents (the present generation) to consume and save for retirement. This argument is closely linked to Ando and Modigliani's (1963) "Life-Cycle Hypothesis of Savings", which postulates that consumption needs vary throughout an individual's life and the level of savings is directly affected due to this. The theory suggests that individuals seek to smooth their consumption and savings behaviour over the long term in the best possible manner. Barrel and Weale (2010: 91) mention the possible risk that young and old generations, respectively, may not form rational expectations regarding levels of consumption. This poses the risk that young generations may choose a pattern of consumption that is inconsistent with what they would hope for when they are older. People may choose a pattern of consumption when they are younger in the hope that their children will support them when they are older. Although it is possible that over-accumulation of capital can take place, it is unlikely. The latter example of under-accumulation is a much more realistic limitation to obtaining equal outcomes for those living in Period 1 and Period 2.

Another problem associated with savings relates to the way in which a fiscal stimulus is targeted. Corden (2010: 44) argues, in terms of Keynesian beliefs, that if the stimulus consisted of direct handouts or tax cuts, there would be little increase in output due to a positive marginal propensity to save. This means that most, or even all, of the extra income received in the private sector would be saved. However, if the fiscal stimulus consisted of government investment, Keynesian thinking would see the potential for a fiscal stimulus to be an effective tool in reducing the output gap to any extent desired by continued government spending. For example, with a marginal propensity to save of 100 per cent, private savings would rise to the same extent as government spending in Period 1, and the offsetting effects – increased private financial assets offsetting increased tax liabilities – would still take place. Elmendorf and Furman (2008: 14) and Freedman *et al.* (2009: 6) agree that a fiscal stimulus needs to be well targeted in order to achieve its desired goals. Buiter (2010: 62) argues this point by discussing the potential for fiscal ineffectiveness based on the composition of the stimulus package. With high levels of household debt, uncertain future income and employment, strong risk aversion and prudence, any increase in current disposable income arising from tax cuts may be saved entirely. This phenomenon of reducing household vulnerability by devoting increased disposable income to paying down debt causes this form of fiscal policy to become ineffective in reducing the output gap. Buiter (2010: 62), in a reflection of the work

done by Minsky (1957), has labelled this practice as 'Minsky Neutrality' and brands it as a strong form of precautionary saving.

Corden (2010: 45) refers to Keynes' 'paradox of thrift' and describes how it is frequently referred to, but often misunderstood. Tobin (1965: 671) discusses this theory by mentioning that it arises when there is an output gap due to a shortage in aggregate demand. The 'paradox' itself is that, while it is in the interest of private households to be thrifty and save, it is in the general interest for people to consume so as to boost aggregate demand. In the context of the OLG model, it is in both the national and private interest that people currently act prudently and save for the future (Period 2), while it is also important to spend and consume now (Period 1) so as to reduce the output gap. It is easy to see the opposing motives; however there is no actual relevance of the paradox when considering increased government spending in the form of investment spending. Corden (2010: 45) illustrates the point that the government, or the private sector, need to increase spending on investment in Period 1. By spending now, output is raised in Period 1 and the future is provided for through investment that yields benefits in Period 2. According to Corden (2010: 45) it is misleading to believe that consumption spending should increase instead of investment spending, highlighting the importance of the previously discussed 'target' areas of a fiscal policy. However, it is important to note that, due to the Keynesian multiplier, it is the increase in consumption spending (via the multiplier) that gives rise to further expansions in income. While the paradox strengthens the case for using government expenditure rather than tax cuts to eliminate an output gap, the induced consumption spending (and saving) is still an important aspect of fiscal policy that can be considered in more depth. Corden (2010) argues that it is essential that investment spending increase, rather than consumption spending, if prudence requires it. With this in mind, the government needs to ensure that saving is converted into investment through fiscal policy.

4.3 *The South African Case*

According to Gordhan, South Africa's growth strategy is based on the principles of counter-cyclicality, debt sustainability, and intergenerational equity (S.A. Government, 2012: 8). With this in mind, the use of the OLG framework is a useful tool for analysing the outlook for the South African economy and considering whether or not the goal of intergenerational equity can be satisfied. The question of whether South Africa meets the conditions necessary for an expansionary fiscal stimulus is looked at first, followed by whether the recent stimulus itself was in accordance with the assumptions previously laid out. The extent to which South Africa fits the general OLG model is focused on in order to determine whether the impact of the expansionary fiscal stimulus, during the crisis, will burden future generations.

South Africa has been plagued by high unemployment levels; approximately one quarter of the labour force remains, involuntarily, without jobs. According to the IMF (2012b) the South African unemployment figure, as a percentage of the labour force, was standing at 22.9% in 2008, rising to 24.9% in 2010. *Table 8* illustrates this high level of unemployment during the crisis, while highlighting South

Africa's unwanted excess capacity and providing the first justification for the use of an expansionary fiscal stimulus.

Table 8: South African Unemployment Rate

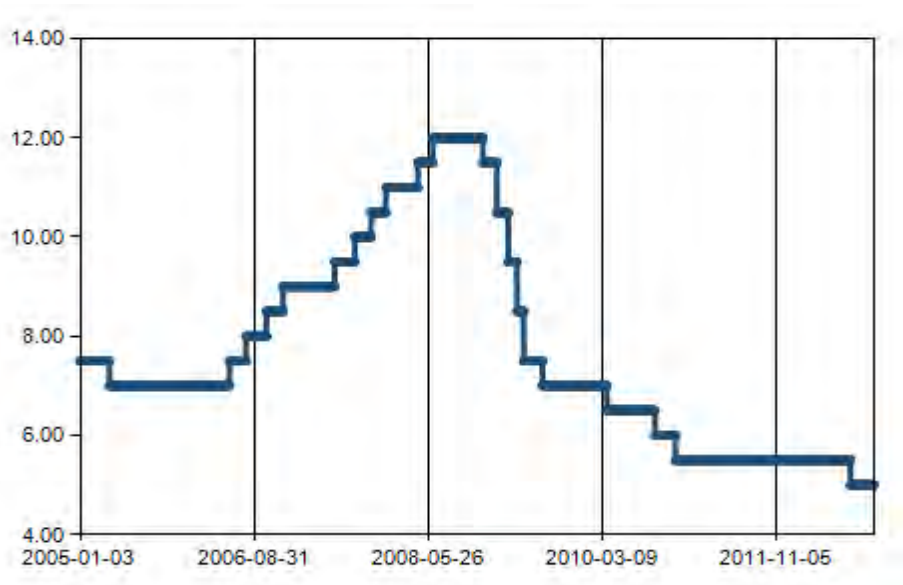
(Percent of Total Labour Force)

							Projections			
	2006	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Unemployment Rate	25.5	22.2	22.9	23.9	24.9	24.5	23.8	23.6	23.3	22.8

Source: IMF (2012b)

With South Africa's key interest rate (the Repurchase Rate) reaching a cyclical peak of 12% in June 2008, substantial cuts were made over the next few years to the recent level of 5% (SARB, 2012). *Graph 12* tracks this decline, illustrating that although monetary policy was used aggressively during the crisis, the "zero-lower-bound-problem" had not been reached. This suggests that financial crowding out has not been an issue for the South African economy. The stimulus package that was put in place over the three years, starting from 2010, placed a large emphasis on public investment with investment in infrastructure programmes being the main focus (S.A. Government, 2010a: 20). Lastly, as Kasekende and Devarajan (2011: 433) argue, the South African fiscal stimulus took into account the fact that the economy is influenced by cross-border externalities which would have made it difficult to completely offset the full effects of the crisis without globally coordinated policies. Considering all these factors, the conditions for a fiscal stimulus package in South Africa were met, albeit as an aid to extensive monetary policy actions.

Graph 12: ***South African Repurchase Rate***



With the conditions for an expansionary fiscal policy considered as having been met, the Keynesian assumptions laid out by Corden (2010) are considered in the context of the South African economy. By highlighting these assumptions, a comparison can be made between South Africa and the model economy set out by Corden (2010) in his analysis of the 'Conservative Allegation'. The first assumption that the debt-financed fiscal stimulus is comprised of public investment is well suited to the 2010 stimulus package. The countercyclical stimulus package of R787 billion, mentioned by Kasekende and Devarajan (2011: 432), highlights the objective to invest in productive public resources that provide beneficial returns to future generations. In addition to this, the 2010 national budget set out an additional R4 296.7 million out of a total R17 049.6 million on infrastructure expenditure for the 2010/2011 period (S.A. Government, 2010b). This public investment has a significant positive marginal social return and provides medium and long-term benefits instead of short-term expenditure that yields no returns. The additional investment, over-and-above the annual outlay, is summarized in *Table 9*.

Table 9: Additional Allocation to National Expenditure *(R millions)*

	Medium Term Expenditure		
	2010/2011	**2011/2012**	**2012/2013**
Central Government Administration	1 882.8	3 072.3	7 510.5
Financial and Administrative Services	1 826.9	1 837.5	1 381.0
Social Services	5 143.8	8 479.1	13 507.1
Justice, Crime Prevention and Security	3 899.4	4 730.2	6 437.0
Economic Services and Infrastructure	4 296.7	5 684.4	8 184.8
Total:	17 049.6	23 803.6	37 020.3

Source: South African National Budget 2010

In the analysis of the 'Conservative Allegation', Corden (2010) assumes the presence of the classical Keynesian multiplier. While no attempt is made to measure the size of the multiplier, the fact of its operation seems logically reasonable to assume; the stimulus provided support to the domestic private-sector, raising output and incomes. Real GDP growth in South Africa increased from -1.5% in 2009 to 2.9% of GDP in 2010 and 3.1% of GDP in 2011 (IMF, 2012b); the extent to which this was a direct result of the stimulus package and any multiplier effects is, however, unclear.

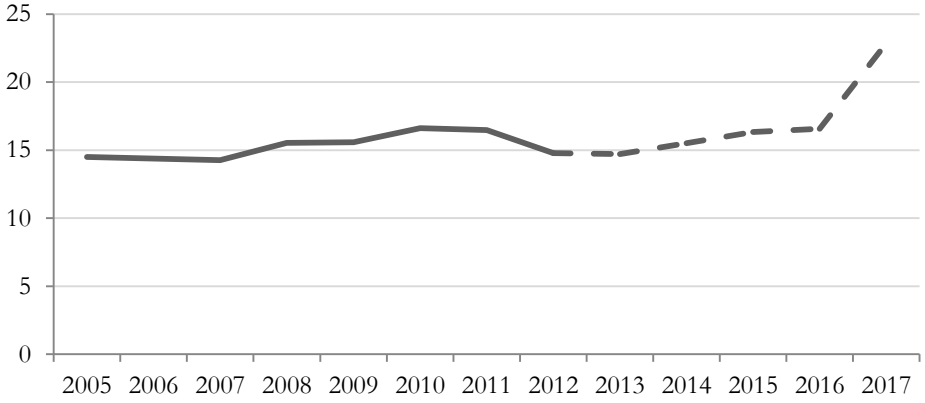
The next assumption is that the country in question had adopted and uses a market-determined, floating exchange rate. Ahmad *et al.* (2010: 3) point out that, during the crisis, South Africa was (and still is) under

using a floating exchange rate regime, albeit subject to limited intervention for 'smoothing' purposes. Corden (2010: 39) also assumes that net international capital flows are zero and that the current account remains in balance. This assumption is not supported in SA; the current account has been in deficit for an extended period. The OLG models as they stand are not designed to capture this and a growing current account deficit in period 1 could well impose a burden in period 2 through, for example, policies designed to reduce imports.

The final assumption made by Corden (2010) is that there is a positive marginal propensity to save in the economy in question. According to the IMF (2012b), South Africa had a gross national savings rate of 16.6% of GDP in 2010 and 16.5% of GDP in 2011. *Graph 13* illustrates this, highlighting the point that the proportion of savings has fluctuated between 14% and 16% of GDP in the last few years. In general, although savings are low, the marginal propensity to save is positive; the last requirement of the proposed OLG model is met.

Graph 13

South African Gross National Savings
(Percentage of GDP)



Source: IMF (2012b)

Having analysed the extent to which South Africa fits the model economy in the 'Conservative Allegation', it is easy to see that the certain aspects of the South African economy can be evaluated against the OLG model. Although the assumptions of the model are simplified and the real workings of the economy are far more complex, it does provide a sound base for the argument that future generations in South Africa will not be subject to any inequitable burden. The sustained current account deficit does, however present a problem. With this in mind, and according to the theory outlined by Corden (2010), if South Africa were to maintain a balanced current account, the expansionary fiscal stimulus will affect the current generation by improving income, employment levels, and consumption. When considering the recession that South Africa was faced with, the current generation will not (according to Corden's (2010) supposition) pass on any burden to future generations. Although it is likely that an additional tax burden

will be passed on from the current generation to the future generation, it is assumed that this burden will be compensated for through the increase in savings that is accumulated from Period 1 to Period 2. Therefore, the additional public debt that South Africa has undertaken during the crisis has been warranted and does (in theory) agree with the S.A. Government's (2012) assertion of intergenerational equity in South Africa.

This is the conclusion given with simplified assumptions, but for completeness it is necessary to mention certain factors that may influence the extent to which the South African economy remains equitable across generations. Firstly, in order for South Africa to meet the simplified assumptions in Corden's (2010) OLG model, the current account would need to be balanced. Furthermore, Mare (2011: 1) mentions that when considering intergenerational equity, demographic influences need to be taken into account. The behaviour of individuals (more specifically the fertility, health, migration, intergenerational exchanges, as well as the economic decisions and education of individuals) is explicitly highlighted. Ardington *et al.* (2010) document the problems in South Africa associated with the prevalence of AIDS, highlighting that intergenerational equity is often considered over three generations as AIDS orphans rely on their grandparents to support them. Small factors such as this influence the extent to which individuals need to save for the future, providing a strong case for the possibility of under-accumulation of capital. The South African case is far more complex than the two-period OLG model may consider. It does, however, provide a simplified outlook for the economy. As previously mentioned, the outlook does seem to allow for intergenerational equity as South Africa has the fiscal space to increase public debt without creating unsustainable policy measures, while avoiding any excessive burden on future generations. This being said, the OLG model is a simplified model (with simplified assumptions) and the real workings of the economy are far more complex.

5. POLITICAL CONSTRAINTS AND THE 'GOLDEN RULE'

The issues of intergenerational equity and debt sustainability have been discussed in the light of world-wide recessionary pressure. Having highlighted the need for governments to reduce fiscal deficits in a sustainable manner, issues surrounding the incentives to do so are now considered. Alesina and Giavazzi (2012: 2) question the willingness of the current generation of voters to reduce the deficit, while mentioning the capacity for fiscal rules to help provide the structure to do so. With politicians playing an important role in deficit reduction, it is necessary to discuss their incentives to take this role upon themselves and the potential for them to lean towards a deficit bias. As Du Plessis and Boshoff (2007: 17) note, South African authorities were bound by a fiscal rule (the 'golden rule') until the 1970's. The viability of the 'golden rule' in South Africa is analysed, keeping in mind that the South African economic climate has changed vastly since the previous implementation of this rule.

5.1 *The Political Constraints in Reducing Deficits*

Corden (2011: 238) emphasizes how fiscal policy actions are often influenced by political incentives to obtain votes or please special interest groups. This creates a form of policy bias that may restrain governments from implementing necessary austerity measures. Alt and Lassen (2006: 1410) highlight this point by proving that political candidates have the potential to influence voter expectations through budget policy. An incumbent may raise debt so as to appear more able to provide public goods, while any austerity measures are likely to lose favour in general voters' perceptions. This political process of thought makes it difficult for a country to attain long-term goals and objectives as the fiscal state of the economy is influenced by political bias. Alesina and Giavazzi (2012: 18) highlight the conventional argument that any enthusiasm that the government shows towards deficit reduction may result in a defeat in the next election. Alesina *et al.* (2012: 1) acknowledge the conventional outlook, but seek to provide evidence of this. After analysing 19 OECD countries, it was concluded that there is no evidence that governments that reduce budget deficits are systematically voted out of office. Although evidence suggests that this practice does not occur, it doesn't suggest that political leaders do not consider this implication during key election periods.

The implementation of a fiscal rule is one method of ensuring that fiscal responsibility is guaranteed across political regimes. Hatchondo *et al.* (2012: 3) define fiscal rules as restrictions that are imposed (often in law or in the constitution) on the future governments' ability to decide on fiscal policy. Schaechter *et al.* (2012: 5) elaborate by mentioning that fiscal rules set boundaries for fiscal policy that cannot be frequently changed, while providing some operational guidance that specifies a numerical target that limits a particular budgetary aggregate. As Auerbach (2011: 20) points out, the European Union implemented such restrictions in the Stability and Growth Pact, with targets for annual deficits and debt of 3% of GDP and 60% of GDP respectively. These limitations were seen as too restrictive for country-specific issues; countries frequently violated these boundaries without any serious repercussions. Buti *et al.*

(2007: 1008) stress the negative implications that were associated with the EU's fiscal rules; creative accounting, once-off operations, exotic transactions, and legally questionable data manipulation started to emerge to avoid constraints on deficits and debt.

The political incentives to circumvent real adjustment suggest that the use of fiscal rules may still fail to completely alleviate the political bias towards larger deficits and debt. Auerbach (2011: 21) adds to this argument by highlighting the distortions in public records that arise, due to misreporting and financial engineering, and undermine any progress in fiscal adjustment. Milesi-Ferretti (2004) considers the effect of transparency on government debt and deficits in a regime influenced by fiscal rules, taking into account the possibility of creative accounting and other manipulative practices. It is argued that with greater transparency comes a greater probability that such practices are revealed; transparency determines the scope for creative accounting versus real fiscal adjustment. Alt and Lessen (2006: 1405) believe that greater transparency results in an improvement in the alignment between the real adjustment needs and the practices employed by political incumbents. With the difficulty in aligning political motives and fiscal adjustment needs, fiscal rules could play an influential role in bridging the gap, but do need to be conscientious, stern, and transparent in nature if they are to be successful.

5.2 *Fiscal Rules*

Having outlined the definition of a fiscal rule and the potential benefit it has in limiting political bias, it is interesting to consider the optimal value of the parameters associated with such a rule and the effects of imposing a fiscal rule. Blanchard (2011: 1) questions the levels of public debt that countries should target, while asking whether "old rules of thumb, such as trying to keep the debt to GDP ratio below 60 percent in advanced economies" is still reliable. To consider the objectives and operational guidance associated with fiscal rules, the different forms of these rules need to be distinguished.

5.2.1 *Debt Rules*

According to Schaechter *et al.* (2012: 7) debt rules set an explicit target or limit on the level of public debt as a percentage of GDP. As Auerbach (2011: 20) points out, the Stability and Growth Pact set out such an explicit debt target of 60% of GDP. By definition this type of fiscal rule is the most effective in ensuring specific debt levels are reached as well as to maintain identified levels of sustainable debt. Although this type of fiscal rule is easy to communicate it does entail some difficulty in enforcement; debt levels usually take some time to be impacted by budgetary measures, providing unclear short-term guidance for policy makers.

5.2.2 *Budget Balance Rules*

As Alesina and Giavazzi (2012: 17) point out, a balanced budget rule that proposes that the budget has to be balanced over every period is the simplest rule. Schaechter *et al.* (2012: 7) define a budget balance rule

as a rule that constrains the variable that primarily influences the debt ratio, while emphasizing the large influence that policy makers have in this regard. This type of rule provides clear operational guidance, while it aids in ensuring debt sustainability. The 'golden rule' is an example of a balanced budget rule. Creel *et al.* (2009: 582) state that this type of fiscal rule targets the overall balance net of capital expenditure, focusing on the point that government borrowing should not exceed net government capital formation.

5.2.3 *Expenditure Rules*

Expenditure rules set boundaries or limitations on total, primary, or current spending. Schaechter *et al.* (2012: 8) explain that this type of rule is typically set in terms of growth rates, absolute terms, or as a percentage of GDP, with a usual time horizon of three to five years. Since these rules do not constrain the revenue side, this form of fiscal regulation is not well suited to targeting debt sustainability. Wierts (2012: 19) points out that, according to theory, expenditure rules can help in countering any spending biases and pro-cyclical responses to revenue shocks. These rules are seemingly easy to communicate and they directly define the expenditure ceilings that identify the amount of public resources that the government is able to use.

5.2.4 *Revenue Rules*

Revenue rules set limitations (in the form of ceilings and floors) on revenues, and seek to either boost revenue collection or prevent an excessive tax burden. These types of rules are not directly related to the control of public debt as they do not constrain spending (Schaechter *et al.*, 2012: 9). They do pose potential difficulties in implementation as setting ceilings or floors can be challenging; revenues may have a large cyclical component which fluctuates with the business cycle. Moore and Redburn (2011: 5) point out that, as with expenditure rules, a revenue rule can be in real or nominal terms, as a fixed percentage of GDP, or include flexibility to allow for a certain growth rate over time.

Table 10 (overleaf) summarizes the advantages and disadvantages of all four types of fiscal rules, emphasizing the difficulties posed when using a specific type of rule. Although these rules are categorized in four broader categories, there are particular fiscal rules within these groupings that are more specific about the nature of their goals.

Table 10: Properties of the Different Types of Fiscal Rules

Type of Rule	Pros	Cons
Debt Rules	• Direct link to debt sustainability • Easy to communicate and monitor	• No clear operational guidance in the short run as policy impact on debt ratio is not immediate and limited • No economic stabilization feature (can be pro-cyclical) • Rule could be met via temporary measures (e.g., below-the-line transactions) • Debt could be affected by developments outside the control of the government
Budget Balance Rules	• Clear operational guidance • Close link to debt sustainability • Easy to communicate and monitor	• No economic stabilization feature (can be pro-cyclical) • Headline balance could be affected by developments outside the control of the government (e.g., a major economic downturn)
Expenditure Rules	• Clear operational guidance • Relatively easy to communicate and monitor • Steers the size of government • Allows for economic stabilization	• Not directly linked to debt sustainability since no constraint on revenue side • Could lead to unwanted changes in the distribution of spending if, to meet the ceiling, shift to spending categories occurs that are not covered by the rule
Revenue Rules	• Steers the size of government • Can improve revenue policy and administration • Can prevent pro-cyclical spending (rules constraining use of windfall revenue)	• Not directly linked to debt sustainability since no constraint on expenditure side (except rules constraining use of windfall revenue) • No economic stabilization feature (can be pro-cyclical)

Source: Schaechter *et al.* (2012)

5.2.5 *Literature*

Without venturing too far from the scope of the study, it is revealing to briefly consider the relevant literature surrounding fiscal rules that have an impact on governments' ability to reduce debt levels while considering the potential for political bias. In spite of large interest from policy makers surrounding fiscal rules, there is little theoretical literature on the topic. In much of the literature the rules do not affect the default premium through expectations about future indebtedness; Hatchondo (2012) is one example. Other literature that omits this focus from their analysis is beneficial in terms of highlighting the conflict of interest between government and private agents. Azzimonti *et al.* (2010) focus on the desirability of a balanced budget rule in the United States, with no compensation for a default premium. Garcia *et al.* (2011) compare a balanced budget rule with a structural surplus rule, while Poplawski Ribeiro *et al.* (2008) find that debt ceilings may be favoured over constraining the government's budget deficit. Beetsma and Uhlig (1999) illustrate the potential benefit of controlling inflation through imposing and advocating lower debt levels. Hatchondo (2012) discusses the optimal parameters associated with fiscal rules and

mentions that there is still significant uncertainty regarding this topic; country-specific cases need to be analysed in order to set appropriate targets or limitations.

5.3 *The Golden Rule*

The 'golden rule' is a balanced budget fiscal rule that allows deficit financing for public investment (Alesina and Giavazzi, 2012: 17). Creel *et al.* (2009: 582) define this rule as stating that, over the business cycle, government borrowing should not exceed net government capital formation. Simply put, the rule allows current spending as long as it is financed by current receipts. Arestis and Sawyer (2010: 337) add to this by mentioning that under a golden rule government should only borrow to fund public investment.

Creel *et al.* (2009: 582) point out that the golden rule allows government to spread the cost of durables over the financial years that the golden rule is in use, and the burden of capital formation over the generations of tax-payers that will benefit from it; the golden rule is thus strongly linked to the concept of intergenerational equity described in the previous chapter. Although welfare benefits from boosting public investment may be unevenly distributed between generations, an instance is set out where private capital, savings and wages should increase. Heijdra and Meijdam (2002) argue that using public bonds to finance some part of the public investment increases equality across generations. Thus, from this perspective, the golden rule is theoretically welfare improving. Arestis and Sawyer (2010: 337) argue that, even when a golden rule is in place, there is still potential for the addition to public debt which may be counterproductive if this additional debt does not contribute to public-sector assets. The argument is that if the focus is turned to the level of public debt, an assessment of the assets and liabilities of the public sector needs to be considered in conjunction with the additional debt. The measurement of the value of public-sector assets is, however, fraught with complications, making the extent to which additional public debt adds value a difficult factor to measure (Arestis and Sawyer, 2010: 337). For this reason the additional public debt needs to be well targeted so as to ensure it is productive. In a similar argument, Balassone and Franco (2000) stress that the definition of 'public investment' in national account statistics, while including transactions that lead to a change in the stock of physical capital (such as the construction of various infrastructure projects), excludes a large amount of expenditure related to the accumulation of human capital (such as training, research, and development). The golden rule thus has the effect of creating a bias towards physical assets at the expense of expenditure on education and health. The vagueness of the 'public investment' definition allows the potential for manipulative practices to arise (such as creative accounting) to cover for a lack of fiscal discipline. Creel *et al.* (2009: 583) argue that the golden rule promotes the increase in public capital where it should be promoting an increase in overall capital, both private and public. In conjunction with Buiter (2001), it is thus concluded that if public capital crowds out private investment there will be no positive effect from implementing a golden rule.

Hemming and Kell (2001: 442) note that the German constitution incorporated a golden rule of public finance for the federal government since 1969, with the introduction of slight amendments to the

constitution in 2009 to include the *Schuldenbremse* ("debt brake"), a balanced budget rule. As Creel *et al.* (2009: 582) and Kilpatrick (2012: 187) note, the United Kingdom is another country that has effectively used the golden rule as an underlying fiscal principle, with France, Spain and Italy all introducing similar provisions in their respective constitutions in 2011.

5.4 *Numerical Rules*

Unlike the golden rule, numerical rules specify a numerical target or limitation. The golden rule is considered to be a procedural rule and will be met if, on average over a complete economic cycle, the current budget is in surplus or at least balanced (Kilpatrick, 2012: 187). The golden rule seeks to manipulate debt and public investment behaviour through guidelines, whereas a numerical rule would specifically quantify these targets or limitations. Numerical fiscal rules can be in the form of debt rules, balanced budget rules, expenditure rules, or revenue rules, as long as they provide a specific numerical regulation for the government to abide by.

An example of a numerical rule is the 'sustainable investment rule' that was adopted by the United Kingdom until 2007 when their fiscal rules were suspended due to the financial crisis (Chote *et al.*, 2010: 4). The sustainable investment rule is a good example of a numerically balanced budget rule. As Kilpatrick (2012: 187) highlights, the sustainable investment rule is a numerical rule that states that "the public sector net debt as a proportion of GDP will be held over the economic cycle at a stable and prudent level". The treasury defined this as less than 40% of GDP at the end of each financial year of the economic cycle. The UK complied with this rule for a decade from 1997, but with the onset of the financial crisis the government realized they would not be able to continue to comply with the rule and thereafter departed from it.

As previously discussed, there is an incentive for the government to manipulate data or take part in creative accounting. With numerical targets, there is a greater motive to obtain these targets or stick within the limitations set. Siebritz and Calitz (2004: 767) note that, in practice, it is relatively easy for governments to circumvent these rules, ignore them, suspend them, or even abandon them. The advantage of such rules, as outlined by Schaechter *et al.* (2012: 8), is that in theory they are easy to communicate and monitor, they provide clear guidance for operation, and they provide numerical restrictions in the form of ceilings or floors, or provide obtainable numerical targets that act as short and medium term policy goals. Hatchondo *et al.* (2012: 3) argue against this by questioning the validity of such numerical targets, asking whether these (often arbitrary) parameters are in fact optimal and reliable. By creating numerical targets, there is a potential for once-off temporary measures to be implemented so as to abide by the rule rather than implement best policy practices. Auerbach (2011: 20) mentions that these numerical rules may be too rigid for country-specific issues, while Siebritz and Calitz (2004: 776) note that flexible numerical rules are very complex in nature and would target long-term policy, both of which are seen as an unnecessary burden on those implementing fiscal policy.

5.5 *The Scope for a Fiscal Rule in South Africa*

As Du Plessis and Boshoff (2007) note, the South African fiscal authorities were bound by the golden rule until the 1970's. Siebrits and Calitz (2004: 767) argue that complete inobservance and circumvention of the rule led to its demise in 1976. This point reiterates the need for fiscal discipline and the adherence to regulations in order for such a rule to have a positive effect on the fiscal stance of a country. With a great deal of scepticism around the ability of fiscal rules to effectively bind governments to sound policies, the South African climate provides the potential for such a rule to be effective once again. Siebrits and Calitz (2004: 770) argue that, although the adoption of fiscal rules does not necessarily improve fiscal outcomes, a rapidly growing economy provides less incentive to circumvent such rules and offers a better prospect for fiscal discipline. On this basis, South Africa can greatly benefit from its growth potential. South Africa has not used a formal fiscal rule since 1976, posing the question of whether there is a sufficient need for South Africa to adopt such a policy.

The post-apartheid government targeted large fiscal adjustment efforts, guided by the goals of the Growth, Employment and Redistribution (GEAR) strategy. Although GEAR had very specific fiscal implications, it did not include any formal numerical fiscal or procedural rules and was flexible in nature (Du Plessis and Boshoff, 2007: 7). This flexibility became evident as the timeframe for reaching the 3% deficit target was extended by one year due to the 1997/1998 currency crisis, while the revenue ceiling was later breached in 2005 and 2006. GEAR may thus be argued to prove that South Africa could achieve targets without imposing permanent restrictions on the values of fiscal aggregates.

The question of whether or not South Africa should implement a fiscal rule, given the current economic climate, and whether it is a numerical or procedural rule, remains a debatable topic. The adoption of a numerical fiscal rule will deprive the government of any flexibility it has at a time where flexibility is essential. Siebrits and Calitz (2004: 781) point out that the South African government value flexibility and have used it wisely thus far. It is also noted that South Africa works on a transparency-based regime, as directed under the Public Finance Management Act (PFMA) of 1999. The Act does not put any limits on the values of fiscal aggregates, but rather addresses the accountability dimension of fiscal transparency by emphasizing regular financial reporting, internal controls, independent audits of control systems, improved accounting standards, and a greater emphasis on performance monitoring procedures (Siebrits and Calitz, 2004: 780). For this reason, it is unlikely that a numerical fiscal rule will add credibility benefits over and above those already enjoyed from the application of the PFMA. As Burger *et al.* (2011: 23) note, there is little probability or risk that the public debt in South Africa will become too high in the near future, making a numerical fiscal rule that targets this threat somewhat futile. In previous chapters it was highlighted that South Africa does not seem to be in any danger of creating an excessive debt burden for future generations, and can even benefit with greater economic growth figures from current deficit levels. For this reason, and the indication that the transparency-based regime is working well, there would be no compelling evidence to impose a numerical fiscal rule in South Africa. However, the potential for a

procedural rule (such as the golden rule) is still worth considering as it allows the government to maintain flexibility, while potentially adding credibility to the current regime. Essentially, it is the trade-off between flexibility and credibility that the government needs to take into account when considering imposing a fiscal rule.

6. CONCLUSION

The history of thought surrounding fiscal policy has been inconsistent since the early Keynesian revolution in 1936. Following Keynes' (1936) ideas on macroeconomic policy, there were four distinct eras that distinguished fiscal policy and moulded the macroeconomic policy tool into what it represents today. Blinder (2004) breaks these four eras into periods of distinct thought associated with fiscal policy: The triumph of Keynesianism between 1936 and 1966; the collapse of consensus between 1967 and 1977; the period between 1981 and 2001 where large deficits crowded out stabilization policy; and finally the new era from 2001 onwards that has seen a resurgence in discretionary fiscal policy.

The three decades following the publication of Keynes' 'The General Theory' (1936) were characterized by growing popularity in fiscal policy and eventually became known as the 'fiscal revolution' in the United States. Keynesian economics advocates a mixed economy in which the financial system is predominantly controlled by the private sector but the public sector and the government play a significant role. Lerner (1943) was a strong advocate at the time, highlighting the importance of well-timed fiscal adjustments. Lerner (1943) strongly believed that the government's budget should be utilized to permanently maintain economic prosperity, and argued against those who didn't agree with his outright support for discretionary fiscal policy. Dillard (1948: 106) believed that new temporary expenditure will have a lasting effect in raising the level of economic activity, terming this as 'pump-priming'. Keynes and Lerner both disagreed on the ability of temporary stimulus packages to have a permanent effect on the level of economic activity, highlighting that this practice would not effectively eliminate the level of unemployment. Lerner (1951: 8) believed that inflationary pressures might ensue before full employment is reached; a change in perspective from earlier work that argued that inflation would not emerge before full employment was attained. This insight brought him closer to the ideas of Keynes, who recognized that a rise in prices may come about before full employment was achieved. Samuelson (1948), in earlier work, was another proponent of discretionary fiscal policy. Although he recognized the benefits of combined fiscal and monetary policy he clearly favoured the former. Musgrave (1948) believed that *ex ante* rules, or fiscal rules, were a beneficial tool in establishing much-needed boundaries for discretionary fiscal policy. Heller (1966) was another advocate of fiscal policy, believing that more focus should be placed on the discretionary nature of fiscal policy instead of reliance on automatic stabilizers.

In a single decade between 1967 and 1977, discretionary fiscal policy lost momentum and credibility as monetary policy became the preferred macroeconomic policy tool. The Vietnam War was instrumental in this change in perspective; excessive government spending amassed on top of an already fully-employed economy created the misperception that Keynesian economics was inherently inflationary. Phelps (1968), Friedman (1970), Barro (1976), and Gordon (1980) strongly supported the use of monetary policy. Eisner (1969) and Okun (1971) attacked discretionary fiscal policy from a theoretical point of view, citing the failure of the 1968 tax surcharge to reduce the Vietnam War-induced inflation as the foundation of their argument. The choice of monetarists to attack fiscal policy on the weak tax effects due to the PIH, as well

as the potential for long inside lags in fiscal policy enactment, allowed many to associate these problems with the general criticism of fiscal policy.

The era from 1981-2001 was characterized by the bold, yet problematic, fiscal policies used initially associated with the Reagan administration. Fiscal responsibility became a source of concern as the administration ran unprecedented peace-time deficits that were widely criticized. The legacy of large deficits left by the Reagan administration encouraged a repositioning of fiscal policy away from cyclical stabilization policy towards secular deficit reduction (Blinder, 2004: 13). In the 1990's, the Clinton administration focused on reducing the budget deficit, balancing the budget, and eventually building a sizeable budget surplus. Blinder (2004: 14) mentioned that the idea of growing the United States' economy by reducing the budget deficit (or increasing the budget surplus) dominated government's thinking at the time, giving little thought to how this would actually happen. This pattern of thought was deeply anti-Keynesian, with the seemingly well-timed countercyclical fiscal movements of the structural surplus in the 1990's being a mere "coincidence" (Taylor, 2000: 34). Previous work done by Blanchard (1984) and Turnovsky and Miller (1984) provided a theoretical base, but were misinterpreted to an extent and used as a foundation for many activists to argue the case for deficit reduction.

Finally, with a new millennium came a new era of thought associated with fiscal policy. The 2001-2003 tax cuts reflected a change in policy from the build-up of excessive budget surpluses into stimulatory fiscal policy through tax cuts that saw popularity shift back to more traditional Keynesian views (Romer and Romer, 2007b: 40). The 2007 sub-prime crisis, and the resultant world-wide financial crisis, provided a substantial argument for Keynesian economics and the liquidity trap. The Keynesian concept of the liquidity trap came to the fore as the efficacy of monetary policy was questioned. With Minsky's (1982) Financial Instability Hypothesis giving a good synopsis of the events leading up to the crisis, authors such as Eggertsson (2009), Erceg and Linde (2010), and Christiano, Eichenbaum, and Rebelo (2010) gave a theoretical foundation to use government spending as a means to improve aggregate demand and stimulate the economy. With this in mind, the focus has shifted to fiscal sustainability and the level at which public deficits become a source of concern for an economy.

With the concept of 'fiscal space' becoming relevant due to the financial crisis, the IMF (2012a: 4) note that many advanced economies entered the crisis with high levels of debt and unfunded liabilities, providing them with little scope or capacity to fully utilize stimulatory fiscal policy measures. Alesina and Giavazzi (2012: 8) point out that the level of economic growth that a country experiences is a crucial determinant of the sustainability of long-term debt.

In 2008 the United States Congress established TARP as a measure to inject capital into some of the country's largest banks (Blinder and Zandi, 2010: 2). With the introduction of TARP, future adjustment plans became a priority to maintain control of the greater debt levels associated with a fiscal stimulus. With monetary policy providing little additional stimulus, the United States Congress passed the

American Recovery and Reinvestment Act of 2009 (U.S. Government, 2009: 17). The aggressive fiscal policy that had been undertaken had been warranted due to exceptional circumstances, but it highlighted the shortcomings of discretionary fiscal policy during times of more 'normal' fluctuations (Blanchard *et al.*, 2010: 206). The pace of U.S. recovery depends greatly on their ability to improve their economic growth figures. With economic growth forecasts of 2.1% of GDP in 2012 and 2.4% in 2013; the U.S. is experiencing ongoing weakness in the labour markets and continued deleveraging pressures (IMF, 2012b: 57). With the projected 2012 maturing debt figure rising to 17.7% of GDP, the total financing need for 2012 accumulates to 25.8% of GDP. General government gross debt rises from a level of 106.6% of GDP in 2012 to 113% of GDP in 2017, emphasizing the increase in medium-term debt. In the long-run, debt-related challenges still remain large for the United States; substantial adjustment over the next decade needs to be undertaken so as to bring debt ratios in line with sustainable levels.

The EU on the other hand has been plagued by two interrelated crises: a banking crisis emanating from losses in capital market securities and bursting property market bubbles in some European countries, and secondly a sovereign debt crisis aggravated by recessionary pressures and poor fiscal management (Blundel-Wignall and Slovik, 2011: 2). Fiscal negligence combined with the socialization of private losses has led to an unstable build-up of public deficits and debt in certain EU countries. In May 2010 Greece was the first country to be shut out of the bond market, with Ireland, Portugal, and Spain following. Each of the bailouts was established on condition that the recipient countries implemented fiscal austerity measures and reforms to structurally improve economic growth (Lane, 2012: 57). The countercyclical fiscal expansion saw the Euro-zone fiscal balance worsen from -0.6% of GDP in 2007 to -2.1% in 2008, and eventually peak at -6.4% at the end of 2009 (IMF, 2011a: 3). The IMF (2011a: 5) note that the overall deficit in the Euro-zone over 2011 period fell sharply due to the withdrawal of fiscal stimulus measures, combined with the lower impact of automatic stabilizers. In the medium-term, fiscal deficits across the Euro-zone are expected to realign with sustainable levels. The negative growth figures across all the Euro-zone countries placed pressure on debt/GDP ratios as these ratios started to increase from 2009 onwards. The IMF (2012a) provide projected gross debt levels, as a percentage of GDP, for 2012 that have risen to 88.1% for the Euro-zone as a whole; 86.3% for France; 120.1% for Italy; and 163.3% for Greece. As Blundel-Wignall and Slovik (2011: 7) note, the Euro-zone public debt will continually grow higher (as a percentage of GDP), making it unsustainable, whenever the primary budget surplus does not offset the burden of debt service when the economy grows. Overall, there are significant challenges that the Euro-zone need to address in the medium-term if debt/GDP ratios are to become sustainable again. With this in mind, the IMF (2012a) projects that the Euro-zone will reach a gross debt level of 90.8% of GDP in 2015, far greater than any figure in the previous ten years.

The effects of the financial crisis that spilled over into many advanced economies had left many African countries relatively unaffected. South Africa was an exception, with the lagged effects of the crisis causing setbacks in economic growth and development gains (Kasekende and Devarajan, 2011: 421). The

stringent financial regulations, as well as the increasingly prudent and stable fiscal policies used in the period building up to the crisis, provided some support for South Africa during the peak of the turmoil. This left South Africa with the fiscal space necessary to use stimulatory measures as an aid to boosting growth when it was needed most. Du Plessis and Boshoff (2007: 5) emphasize that, from 1999 until the crisis, the South Africa economy been characterized by steady growth, stable fiscal deficits, and sustainable debt levels. With a general balance surplus in 2006 and 2007 of 0.8% and 1.5% of GDP respectively, South Africa started to run larger fiscal deficits (in response to the recessionary pressures of 2008/2009) to provide a countercyclical fiscal stimulus. As South Africa exits from the fiscal stimulus, and the crisis as a whole, the fiscal deficit is projected to reduce to levels recorded before the brief fiscal surplus period in 2006/2007. The 2012 year is projected to see a slight decline in growth levels due to South Africa's exposure to the European markets, but these growth rates are projected to pick up by 2014 and 2015, lingering around an annual rate of 4%. The 2015 fiscal year will see the deficit reduce enough to fall within the -3% level, with a projection of -2.4% of GDP. As the exit from the fiscal stimulus is to take place gradually, debt levels will continue to increase over the next few years, reaching a level above 40% of GDP in 2013. Jooste and Marinkov (2012) believe a gradual reduction in the fiscal deficit is the ideal response, in opposition to either any extreme measures to reduce or to leave the fiscal deficit as is. South Africa is not in any position at the moment, or in the near future, where it is likely that public debt will become too high and threaten debt sustainability.

The resulting question that was raised from this was whether or not South Africa can adopt further stimulatory fiscal measures, with a simultaneous increase in the level of debt, to improve its long-term growth potential in a sustainable manner without creating an excessive burden on future generations. In answering this question, an OLG model outlined by Corden (2010) was analysed as well as whether or not a fiscal stimulus was, and still is, warranted given the specific circumstances faced by South Africa.

Buiter (2010) discusses certain conditions that need to be met in order for an expansionary fiscal policy to be warranted. Firstly, there need to be idle resources; that of involuntary unemployment and unwanted excess capacity. This means that output and employment are effectively constrained by demand. Next, monetary policy as a stimulatory tool must be rendered ineffective in stimulating aggregate demand and a fiscal stimulus would be the most effective option left. Thirdly, interest rates must not be driven up to the extent that financial crowding out occurs and the expansionary fiscal stimulus renders itself powerless. At given interest rates, direct crowding out must not diffuse the expansionary fiscal policy. Finally, the existence of cross-border externalities present the potential to cause decentralized, uncoordinated national fiscal expansionary policies to be suboptimal in nature.

The 2010 expansionary fiscal stimulus package, in light of these conditions, is most certainly justified. With approximately one quarter of the labour force being involuntarily unemployed during the crisis and for the foreseeable future, South Africa has idle resources that are not being used productively (IMF, 2012b). Monetary policy was extensively used during the crisis and has not reached the "zero-lower-

bound-problem" as of yet, meaning there is still a scope for this policy tool. The decline in interest rates does, however, illustrate that financial crowding out has not been an issue for the South African economy, suggesting that fiscal policy measures have been well targeted and productive. S.A. Government (2010a: 20) emphasize that the stimulus package that was put in place over the three years, starting from 2010, placed a large emphasis on public investment with investment in infrastructure programmes being the main focus. In an economy that needs a boost to aggregate demand, combined with well-directed fiscal stimulus measures, South Africa meets the conditions for the use of a stimulatory fiscal impetus as an aid to realign the country with its long-term growth goals.

Having justified the implementation of the 2010 expansionary fiscal stimulus package, and the potential for further stimulus packages, the focus turns to the issue of intergenerational equity. Gordhan states in the national budget speech that, through the medium-term phasing in of fiscal consolidation, South Africa will not create any excess debt burden for future generations and the economy in general (S.A. Government, 2012: 9). In analysing this point of view, the two-period model outlined by Cordon (2010) is considered. This model suggests that there are two periods. Period 1 is the initial period where potential output is greater than actual output, hence the existence of an output gap. During this period an expansionary fiscal stimulus is undertaken so as to raise incomes and improve output. Period 2 is the 'future' period in which output and income levels have recovered sufficiently, either due to previous fiscal stimuli or due to a natural recovery in the absence of any stimuli. A fiscal stimulus in Period 1 would increase output, income, and eventually consumption; benefiting those living in Period 1. The increased level of saving would benefit those living in Period 2; however they are burdened by an increase in their tax liabilities due to the initial stimulus. With the specific assumptions in place and in response to a crisis, Cordon (2010: 41) believes that the increase in tax liabilities passed on from the first to the second period will be exactly offset by the increased savings passed on from the first to the second period; meaning that the initial stimulus does not pass any burden on to future generations.

Having analysed the extent to which South Africa fits the model economy in Cordon's (2010) 'Conservative Allegation', it may be argued that the South African economy can be evaluated against the OLG model. The assumptions of the OLG model are simplified and the real workings of the economy are far more complex. However, the theory does provide a basis for the argument that future generations in South Africa are not likely to be subjected to any inequitable burden. According to the theory outlined by Corden (2010), *if South Africa can bring the current account into balance*, the expansionary fiscal stimulus will affect the current generation by improving income, employment levels, and consumption. The current generation will not (according to theory) pass on any burden to future generations. With it being likely that an additional tax burden will be passed on from the current generation to the future generation, it is assumed that this burden will be compensated for through the increase in savings that is accumulated from Period 1 to Period 2. Therefore, the additional public debt that South Africa has undertaken during the crisis has, to some extent, been warranted and does agree with the S.A Government's (2012) assertion

of intergenerational equity in South Africa. However, the OLG model does not account for an increasing current account deficit and may cause disparity in the conclusion given.

This is the conclusion given with simplified assumptions and the belief that Cordon (2010) is correct in his analysis. For completeness, it is necessary to state that these assumptions are simplified and other factors may influence the extent to which the South African economy remains equitable across generations. As Mare (2011: 1) emphasizes, demographic influences need to be taken into account when considering intergenerational equity. More specifically, the behaviour of individuals (fertility, health, migration, intergenerational exchanges, as well as the economic decisions and education of individuals) influences the dynamics of intergenerational equity. The prevalence of HIV/AIDS in South Africa, and the potential for under-accumulation of capital savings, are examples of why the simplified OLG model may not completely account for the real-workings of the South African economy.

After highlighting the need for governments to reduce fiscal deficits in a sustainable manner, the political incentives associated with maintaining such deficits were discussed. As politicians play an important role in deficit reduction, it is important to consider any bias that may arise which would overlook public interests. Formal fiscal rules were analysed as a means of eliminating this potential bias, and the scope for a fiscal rule in South Africa was explicitly covered.

Alt and Lassen (2006: 1410) emphasize that political candidates have the potential to influence voter expectations through budget policy, mentioning that policy actions are often influenced by political incentives to obtain votes or please special interest groups. This creates a form of policy bias that may restrain governments from implementing well-needed austerity measures. By increasing debt levels, an incumbent would appear more able to provide public goods, while any austerity measures are likely to lose favour in general voters' perceptions. This thought process makes it difficult for a country to uphold long-term fiscal goals. Alesina and Giavazzi (2012: 18) highlight the conventional argument that any enthusiasm that the government shows towards deficit reduction may result in a political defeat in the next election.

The implementation of a fiscal rule is one way of ensuring that fiscal responsibility is guaranteed across political regimes. Hatchondo *et al.* (2012: 3) define fiscal rules as restrictions that are imposed (often in law or in the constitution) to the future governments' ability to decide on fiscal policy. Schaechter *et al.* (2012: 5) elaborate on this by mentioning that fiscal rules set boundaries for fiscal policy that cannot be frequently changed, while providing some operational guidance. There are two forms of fiscal rules, numerical rules and procedural rules. Within these two broad categories, specific types of fiscal rules take the form of debt rules, balanced-budget rules, expenditure rules, or revenue rules. The political incentives to circumvent real adjustment suggest that the use of fiscal rules may still fail to completely alleviate the political bias towards larger deficits and debt. Auerbach (2011: 21) argues that distortions in public

records arise, including creative accounting, once-off operations, exotic transactions, and legally questionable data manipulation that undermine any progress in fiscal adjustment.

Blanchard (2011: 1) questions the levels of public debt that countries should target when implementing a numerical fiscal rule, asking whether these old rules of thumb are still reliable. South Africa was bound by a 'golden rule' until the 1970's (Du Plessis and Boshoff, 2007: 17). Complete inobservance and circumvention of the rule led to its demise in 1976. With a great deal of scepticism around the ability of fiscal rules to effectively bind governments to sound policies, the South African climate provides the potential for such a rule to be effective once again. However, the adoption of a numerical fiscal rule will deprive the government of any flexibility it has. Siebrits and Calitz (2004: 781) point out that the South African government value flexibility and have used it wisely thus far, noting that South Africa works on a transparency-based regime. For this reason, it is unlikely that a numerical fiscal rule will add credibility benefits over and above those already enjoyed from the application of the PFMA. Conversely, the potential for a procedural rule (such as the golden rule) is still worth considering as it allows the government to maintain flexibility, while potentially adding credibility to the current regime. As Siebrits and Calitz (2004: 770) argue, the adoption of fiscal rules does not necessarily improve fiscal outcomes. With this in mind, the issue of whether or not South Africa should implement a fiscal rule given the current economic climate remains debatable, but in favour of avoiding any formal numerical rules that restrict the country's fiscal flexibility.

To summarize, fiscal policy has made a strong resurgence in the minds of many over the last decade, with popularity shifting back to traditional Keynesian views, especially those of Heller (1966) which involve greater levels of activism and discretionary action. Discretionary fiscal policy is seen as a useful stabilization tool when monetary policy reaches the lower bound. The U.S. and Euro-zone have been plagued with debt-sustainability issues, while South Africa has been fairly isolated in this regard. This has opened up the potential for South Africa to use discretionary fiscal policy, with a simultaneous increase in the level of debt, to improve its long-term growth potential. After considering a simple OLG model, this would be done in a sustainable manner without creating an excessive burden on future generations. This is in line with the goals of debt-sustainability and intergenerational equity set out by the S.A. Government (2012: 8). The possible use of a procedural fiscal rule, such as the 'golden rule', may add credibility to the current regime, while a numerical fiscal rule is seen as unnecessary given South Africa's responsible use of fiscal policy thus far. As it stands, there is little probability or risk that the public debt in South Africa will become too high in the near future. Although South Africa has been affected by the crisis, the developmental nature of the economy has been maintained through the use of responsible discretionary fiscal policy; putting South Africa in a positive position to meet its long-run growth potential.

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