
Introduction

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Six years after the Crisis and the recovery is still anaemic despite years of zero interest rates. Is ‘secular stagnation’ to blame? This eBook gathers the views of leading economists including Larry Summers, Paul Krugman, Bob Gordon, Olivier Blanchard, Richard Koo, Barry Eichengreen, Ricardo Caballero, Ed Glaeser and a dozen others. It is too early to tell whether secular stagnation is really secular, but if it is, current policy tools will be obsolete. Policymakers should start thinking about potential solutions.

Six years after the Global Crisis exploded and the recovery is still not going well. Pre-Crisis GDP levels have been surpassed, but few advanced economies have returned to pre-Crisis growth rates despite years of near-zero interest rates. Worryingly, the recent growth is fragranced with hints of new financial bubbles.

The length of the Great Recession, and the extraordinary measures necessary to combat it, created a widespread but ill-defined sense that something had changed. This ill-defined sense was given a name when Larry Summers re-introduced the term ‘secular stagnation’ in late 2013. But what does secular stagnation really mean? What has changed? And if this is secular stagnation for real, what should be done about it?

With these questions in mind, we assembled a group of leading economists to offer their views on secular stagnation. This is far from a homogenous group – they come from different continents and different schools of thought. Their contributions were

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uncoordinated and they do not entirely agree, but a fairly strong consensus has emerged on three points.

- First, a workable definition of secular stagnation is that negative real interest rates are needed to equate saving and investment with full employment.
- Second, the key worry is that secular stagnation makes it much harder to achieve full employment with low inflation and a zero lower bound (ZLB) on policy interest rates.

Larry Summers' chapter adds in financial stability: "It may be impossible for an economy to achieve full employment, satisfactory growth and financial stability simultaneously simply through the operation of conventional monetary policy".

- Third, it is too early to know if secular stagnation is more than just old-fashioned slow growth, but economists and policymakers should start thinking hard about what should be done if secular stagnation materialises – the old macroeconomic toolkit is inadequate.

Another important point concerns the US-Europe distinction. "Europeans should be much more afraid than Americans", Nick Crafts notes in his chapter. "The depressing effects of slower growth of productive potential will probably be felt more keenly in Europe." Juan Jimeno, Frank Smets, and Jonathan Yiangou also make similar arguments in their chapter.

The rest of our introduction structures the secular stagnation (SecStag for short) debate. Section 1 disentangles various interpretations of SecStag as a roadmap for the rest of this eBook. Section 2 digs deeper into the evolution of one variable that turns out to be crucial to the debate: the real interest rate. Section 3 deals with a potentially nasty consequence of low real interest rates: the emergence of bubbles. Section 4 sketches the policy implications of the debate. Many engrained policy concepts fail in a SecStag world. New economic thinking is needed. We trust the chapters of this book will offer plenty of inspiration.

1 Secular stagnation: What it is and why it matters

In 1938, nine years after the beginning of the Great Depression, Alvin Hansen delivered his presidential address, “Economic Progress and Declining Population Growth”. Hansen held his talk after an era of unprecedented expansion of the US economy, both in terms of population and the land available. The end of this period and the experience of the Great Depression led Hansen to wonder whether there would be sufficient investment demand to sustain future economic growth.

Larry Summers recently resurrected this idea in his November 2013 speech to the IMF Forum – fleshing out his thinking in a February 2014 speech to the National Association for Business Economics (Summers 2014). The ‘secular stagnation’ term struck a chord. As Barry Eichengreen puts it in his perceptive contribution to this eBook: “The idea that America and the other advanced economies might be suffering from more than the hangover from a financial crisis resonated with many observers.”

The resonance, however, did not produce harmony. As Barry Eichengreen observes: “But while the term ‘secular stagnation’ was widely repeated, it was not widely understood. Secular stagnation, we have learned, is an economist’s Rorschach Test. It means different things to different people.” Fortunately, Macroeconomics 101 provides a straightforward way of structuring the various views.

1.1 Organising the SecStag discussion

Basic macroeconomics provides a three-pillar framework for thinking about an economy’s future growth. First is the economy’s long-run *potential growth* rate. Second is the deviation of *actual* growth from its potential. Third is one-off changes in the *level* of GDP without a change in the long-run growth *rate*. All the various contributions stress one or more of these. We address the pillars in turn.

Diminished long-run growth potential

- The first pillar focuses on Solow-Romer factors – growth may be low since the long-run potential growth rate has fallen.

The first pillar comprises two blocks, since an economy's growth potential depends on: (i) the growth in productive inputs, and (ii) the growth in the efficiency with which inputs are combined to produce output.

Bob Gordon's chapter presents a thorough analysis of the pillar-one reasons for slow future growth for the US. Going beyond his earlier work, Gordon stresses that his 2012 piece (Gordon 2012) is commonly misperceived as focusing only on technology. His chapter also refines his view on technology: "In my numbers there is no forecast of a future technological slowdown – productivity growth adjusted for educational stagnation is predicted to be just as fast during 2007-32 as during 1972-2007." His argument is not that technological progress has stopped, but rather that it has returned to its (low) historical norm. For the three decades before 1930 and the four decades since 1980, US total factor productivity (TFP) growth averaged about 0.5% annually. The aberration was the intervening five decades where TFP grew three times faster.

Beyond technology, he focuses on four structural 'headwinds'.

1. Demography: The population is stagnant, life expectancy is increasing rapidly.
2. Education: The mass education revolution is complete, no further increase in the average US education level is to be expected.
3. Inequality: The raising share of the top 10% of the income distribution has deprived the middle class of income growth since 1980.
4. Public debt: The gloomy outlook for public debt makes current public services unsustainable.

These will, he projects, knock off 1.2% from the 1891-2007 average US per capita growth rate of 2.0%. On top of this, he deducts an additional 0.6% for productivity growth that he views as being slower in coming decades than it has been in the past.

Joel Mokyr, Ed Glaeser, and Nick Crafts cast serious doubts on his technology projections. In his chapter, Mokyr claims that IT, biotech, and new materials are going to revolutionise the world. He claims that the contribution of IT to our wellbeing is not evident from the productivity statistics because the way “we measure GDP and productivity growth is well designed for the wheat-and-steel economy”. It works when pure quantities matter; it does not for measuring the fruits of the IT revolution. Or as Glaeser puts it: “During the first ten years of my life (1967-1977), the only major technological innovation that I observed entering our apartment was colour TV, and that TV broadcast roughly the same set of channels over the decade. How can such a world possibly be compared with innovations of the past decade?”

Glaeser’s chapter also introduces a fascinating twist on the faltering-innovation idea. While rejecting the notion that human inventiveness has stalled, he questions whether today’s inventions bring widespread benefits. “Perhaps, we are just experiencing an era in which innovation benefits the few rather than the many”, he writes. New technology impacts people as consumers and producers. Pre-1990 innovations tended to benefit ordinary citizens as both consumers and producers. But today, he notes, “[h]ighly paid workers work constantly to improve a service that is provided freely to hundreds of millions of poorer users”. While he doesn’t tie this “inversion of the traditional nature of innovation” to secular stagnation, it surely links up with Gordon’s inequality headwind.

Persistent GDP gaps

- The second pillar of the SecStag discussion is firmly Keynesian with all its modern amendments and refinements – growth may be low since it is below its long-run potential growth rate.

This was the basic premise of Summers' 2013 remarks.² As he put it: "Suppose that the short-term real interest rate that was consistent with full employment had fallen to negative two or negative three percent sometime in the middle of the last decade. ... [W]e may well need, in the years ahead, to think about how we manage an economy in which the zero nominal interest rate is a chronic and systemic inhibitor of economic activity, holding our economies back below their potential."

This aggregate-demand-shortage view is also stressed in Paul Krugman's chapter: "Secular stagnation is the proposition that periods like the last five-plus years, when even zero policy interest rates aren't enough to restore full employment, are going to be much more common in the future..."

Summers' chapter in this eBook is plainly in the second-pillar, Keynesian camp, but it shows an evolution of this thinking. His well-known 2014 address mentions financial instability only once. His chapter in this eBook makes it part of the fundamental policymaking predicament. "Macroeconomic policy as currently structured and operated may have difficulty maintaining a posture of full employment and production at potential", he writes, "and if these goals are attained there is likely to be a price paid in terms of financial stability." In short, SecStag may force policymakers to choose between sluggish growth and bubbles.

One long-lasting source of excess savings – and one that is particularly relevant to European nations like Ireland and Spain – is the 'balance-sheet recession' notion stressed by Richard Koo in his chapter. When a debt-financed bubble bursts, firms and households simultaneously attempt to pay down their debt. While sensible at the individual level, the result is an enduring lack of aggregate demand. If the new savings fail to find new investment opportunities, GDP may fall and Keynes's paradox-of-thrift can worsen balance sheets, thus prolonging the recession.

2 A transcript is available at <https://m.facebook.com/notes/randy-fellmy/transcript-of-larry-summers-speech-at-the-imf-economic-forum-nov-8-2013/585630634864563>. The video is available at <https://www.youtube.com/watch?v=KYpVzBbQIX0>.

One-off supply-side damage

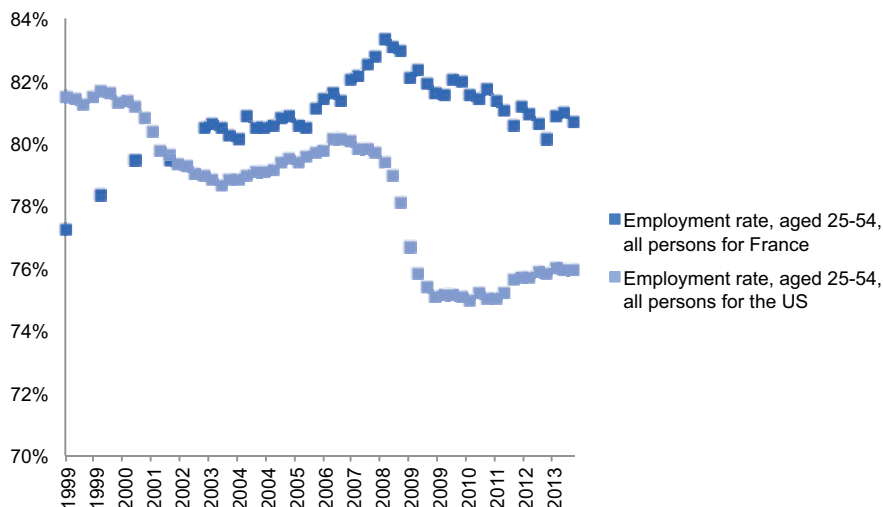
- The third pillar in our Macro 101 framework emphasises levels rather than growth rates – especially one-off, crisis-linked damage to the economy’s potential output.

This part of the SecStag discussion draws on a much older literature on labour market hysteresis. In their seminal paper, Blanchard and Summers (1986) coined the term ‘Euroclerosis’, as they viewed hysteresis as a European problem. After each recession, unemployment jumped up, never to return to its pre-recession level.

Glaeser shows that up to 1970, the share of US prime-aged males without jobs was 5% in good times and 8% in downturns. After 1970, a ratchet effect kicked in; recession-linked rises in joblessness were not fully reversed during recoveries. The damage is permanent, according to Glaeser: “Human capital depreciates off-the-job, so talent is lost.” This sort of one-off supply-side damage could account for why US growth seems to have converged back to its pre-Crisis rate, but not to its pre-Crisis trajectory. Gordon’s chapter cites recent research showing that about half the US decline in participation comes from ageing and the other half is from declining participation within age groups, due in part to weak economic conditions.

Importantly, ratchet-like labour participation problems don’t seem to be the story in Europe, as Figure 1 shows. Employment rates in old sclerotic France improved, while those in the US worsened.

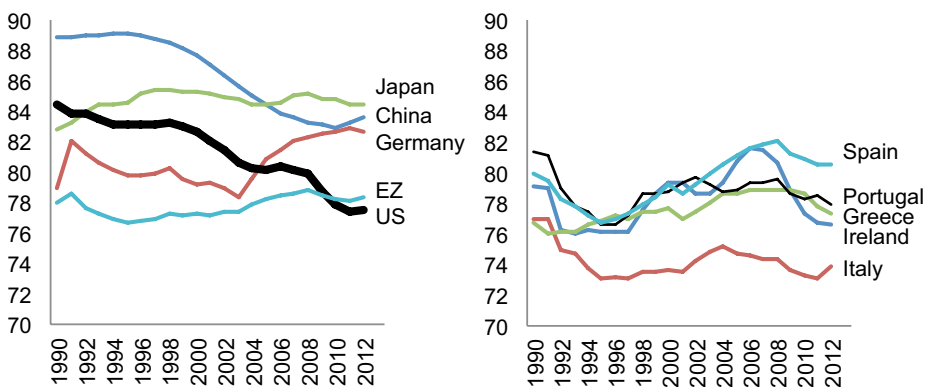
Figure 1 Employment rate, ages 25-54, US and France



Source: FRED online database, <http://research.stlouisfed.org/>

Indeed, the left panel of Figure 2 shows that the US is an outlier among the four largest economies (US, China, Japan, and Germany) and the Eurozone (EZ). The data show the clear secular decline for the US, with US participation now by far the lowest among the world's four largest individual economies (although it is similar to the Eurozone's overall average). More than one in five prime-aged American men are without a job.

Figure 2 Labour force participation rate of men aged 15-64, 1990 – 2012.



Notes: The figure focuses on prime-aged males to avoid issues regarding changes in the societal views on child-care governing female labour supply and issues regarding the take-up of education and retirement.

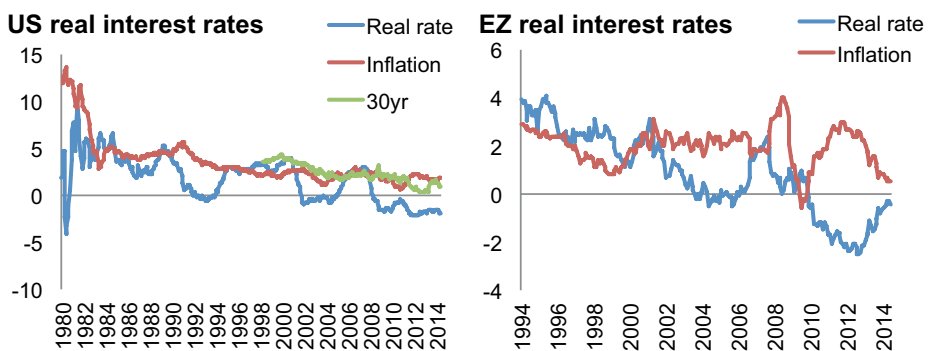
Source: World Bank online database, series SL.TLF.ACTI.MA.ZS.

The right panel of the chart shows the same figures for European countries hit severely by the Crisis. Here again, the US ratchet pattern is missing, with Italy being perhaps the exception. Spain, Portugal, Greece, and Ireland experienced recession-linked dips in labour force participation, but these are not particularly marked compared to the early 1990s recession, though a particularly high share of labour is unemployed in both Spain and Greece. Given the importance of employment rates in the SecStag debate, this striking transatlantic difference surely deserves further attention.

2 Low real interest rates: Why they matter and why they fell

Krugman's chapter shows that the US real interest rates averaged over peak-to-peak business cycles dropped from 5% in the 1980s, to 2% in the 1990s, and to just 1% in the 2000s. Since the Lehman collapse, they have averaged about -1%. Figure 3 shows the long-run decline in the US and the recent decline in the Eurozone, as well as their connection to inflation.

Figure 3 Real interest rates in the US and the Eurozone



Note: The US chart depicts both the real interest rate calculated as the difference between overnight interest rate and inflation and the rate for 30-year inflation-linked bonds. The latter is less sensitive to business cycle fluctuations and therefore provides a cleaner picture of the decline.

Source: ECB and Bloomberg.

2.1 Why low interest rates matter

Low real interest rates play a linchpin role in the secular stagnation debate for two reasons.

- First, if real rates are low in normal times, adverse macroeconomic shocks are more likely to require negative real rates to restore a full-employment investment-savings balance.

In today's low-inflation environment, this tends to undermine the effectiveness of monetary policy.

- Second, low nominal and real interest rates undermine financial stability.

Summers lists three channels through which low rates may foster instability: (i) they increase risk-taking as investors reach for yield; (ii) they promote irresponsible lending as coupon obligations become very low and easy to meet; and (iii) they make Ponzi financial structures more attractive as interest rates look low relative to expected growth rates. "Something of this kind was surely at work during the 2003-07 period", he asserts.

2.2 Why real interests have fallen

A bouquet of contributions focuses on why equilibrium real interest rates have fallen steadily over the past few decades. Standard determinants of the 'natural' or 'Wicksellian' rate are: (i) the savings-supply schedule, (ii) the investment-demand schedule, and (iii) the relative demand for safe versus risky assets.³ The chapter by Olivier Blanchard, Davide Furceri and Andrea Pescatori looks at determinants of the natural rate of decline from a global perspective, while the chapter by Juan Jimeno, Frank Smets and Jonathan Yiangou focuses on the Eurozone.

³ In the short run, monetary policy can also influence the real rate. But Blanchard, Furceri and Pescatori find that "the monetary policy stance of most advanced economies was on average neutral, contributing little to the determination of long-term real interest rates".

We consider these factors in turn.

The supply of loanable funds

An outward shift in the supply of loanable funds could help explain the lower real interest rates. Such shifts are tied to demographics assuming people saving to smooth lifetime consumption. The chapter by Gauti Eggertsson and Neil Mehrotra chapter is theoretical, but the demography-savings link can be quantified.

In Table 1 we have calibrated their model to calculate the stock of saving required for consumption-smoothing for the world's four largest economies – assuming that there were no pay-as-you-go (PAYG) transfers between generations. The numbers show that the demographic shift has led to a dramatic increase in the required stock of savings in all four countries over the past 40 years.

For example, required savings rose from almost two times GDP in 1970 to three and a quarter times GDP in 2010 for Germany. Three factors contributed to this increase:⁴ the increase in life expectancy (see Table1), the lower [retirement age](#), and the decline in the [growth rate of the population](#). The increase in [years of education](#) is the only factor pushing in the other direction. The latter explains why the US has seen the most dramatic increase in the required savings despite its demography shifting the least. By 1970, the education revolution was almost over in the US, while in other countries the take-up of education by new cohorts has gone up substantially since 1970.

Our rough calculations suggest that there was sizeable swing between 1970 and 2010 in the required stock of savings necessary to smooth lifetime consumption. Given the size of the nations listed (40% of world GDP) and the fact that the rest of Europe resembles Germany and many developing nations resemble China, it seems clear that the increase in the required stock of savings has been a global phenomenon.

4 Tables for each of these variables are available [here](#).

Table 1 The implications of demographic change for the required stock of savings

	Share of world GDP (%)	Life expectancy (years)			Required stock of savings (share of GDP)		
	2010	1970	1990	2010	1970	1990	2010
US	23.37	70.90	75.30	78.60	-2.28	-0.20	0.52
China	9.26	62.90	69.50	74.90	-0.40	-0.48	0.86
Japan	8.58	72.00	78.90	82.90	-1.76	-0.27	1.19
Germany	5.17	70.60	75.30	80.50	1.89	2.49	3.25

Note: The required-savings calculation assumes perfect consumption-smoothing from the age of ten until expected death, using life expectancy. The calculation takes into account the years of education before the start of the labour market career, the age of retirement, and the population growth rate. The formula used for the calculation can be found [here](#).

Source: IMF, OECD and own calculations for required savings stock.

Demand for loanable funds

Blanchard, Furceri and Pescatori attribute little explanatory power to the investment side. But Glaeser makes some interesting points about how the heightened role of IT sectors could shift the investment demand schedule. The key is that the development of high value-added services by Google, Microsoft, Amazon, Facebook and the like require relatively little investment. Summers (2014) makes a similar point in noting that WhatsApp has a greater market value than Sony but required next to no capital investment to achieve it. More detailed work is needed, but the rough numbers suggest it could be important. According to [PwC's Global Top 100 companies](#), IT companies account for 25% of the market capitalisation of the top 100 companies in 2014.⁵

Relative demand for safe assets

Most real interest rate calculations are based ultimately on the nominal return to safe assets such as US Treasury bills. The price of such bonds depends, *inter alia*, on their

⁵ IT includes Amazon (which is classified by PwC as Consumer Services). The grand total excludes Financial Services to avoid double-counting.

supply and the safety preferences of financial investors. There are good reasons for supposing that both have shifted.

Ricardo Caballero and Emmanuel Farhi show in their chapter that the supply of safe assets fell from 37% of world GDP in 2007 to 18% in 2011. The financial crisis carved out almost half of the supply of safe assets. The main culprits are the collapse of the market for asset and mortgage-backed securities and the downgrading of sovereign debt from Italy and Spain. The financial technology for producing risk-free assets proved to be inadequate.

On the demand side of the market, an opposite trend hit. Pension funds, banks, and insurance companies were forced by regulators to increase their holdings of safe assets. This led to massive excess demand for safe assets. Not surprisingly, the risk-free interest dropped to a historic trough.

3 Bubbles and low interest rates

Beyond ZLB issues, which have been the main concern in the SecStag discussion to date, low real rates can produce bubbles and foster financial instability – as Summers argues forcefully in his chapter. When the real rate, r , falls to values close to the economy's growth rate, g , asset prices start to explode in a 'rational' way (as pointed out by Tirole 1985).

A typical example is gold. If the gold supply is fixed and everyone invests a fixed share of their rising income in gold, the price of gold will rise at the income growth rate, g . As long as g is at least as high as the alternative real interest rate r , we get a rational bubble – defining a bubble as an asset whose price exceeds the present value of its associated

income stream.⁶ But even without such extreme outcomes, low r tends to encourage bubbly asset prices, as Summers argues.

Bubbles are an alternative way for society to deal with excess saving when fiscal policy does not take up the challenge. Buying bubbly assets with the intention of selling them at a later date is an alternative route of saving for future consumption. When nobody wants to invest because r is below g , and hence buys bubbly assets, the price of these assets goes up, yielding windfall profits to their sellers who are therefore able to increase their consumption. This additional consumption restores the balance between supply and demand for loanable funds on the capital market. This explains why so many high-valued apartments in Shanghai are vacant. They are just bubbly assets, stores of value. This fits theory: g is high in China, r is not, and rational bubbles are thus likely to emerge.

Richard Koo stresses in his contribution the necessity for fiscal policy to absorb the excess saving after a bubble has burst and the private sector has to deleverage. The above argument takes this reasoning one step further: fiscal policy should help to avoid rational bubbles to emerge. This is the *paradox of ageing societies*. Ageing leads – other things being equal – to an increase in the required stock of savings (see Table 1). A greater supply of savings is one of the Wicksellian forces pushing the real interest rate down. Hence, ageing societies might run a greater risk of bubbles popping up.

As Blanchard, Furceri and Pescatori show, the capital market has become increasingly globalised. From that perspective, dealing with excess saving is a global issue, as demonstrated in the years prior to the Great Recession, when the US housing market absorbed China's excess saving. However, in times of crisis capital tends to repatriate to its country of origin. From that perspective, China and Europe – the two parts of the world economy that have the most excess saving – should solve their saving problem

6 The real estate bubbles in Spain and Ireland were irrational, at least in retrospect. One could know that there would be no demand for such a high construction volume. The more price elastic the supply of a bubbly asset, the greater the risk that a bubble goes bust, as more and more people start investing in the production of the bubbly asset. This makes real estate in the centre of prime cities an attractive bubbly asset – its supply is limited by the availability of land in the city centre (see the analysis of debt-financed bubbles in Koo's contribution).

themselves. Other parts of the world are unlikely to provide the investment opportunities they are looking for.

Such issues, however, deserve more attention. As Summers writes: “There is important work to be done elucidating the idea of secular stagnation in an open economy context.”

4 Policy responses

Slow growth is hardly a novel policy problem; why should calling it ‘secular stagnation’ change anything? The analysis of many authors in this eBook provides a clear rejection of this scepticism.

- Secular stagnation is different since it undermines the most powerful and flexible tool we have for keeping growth near its potential rate – standard monetary policy.

A workable definition for secular stagnation is that negative real interest rates are needed to equate saving and investment with full employment. As such, secular stagnation raises the likelihood that full employment cannot be achieved because low inflation and the ZLB on nominal interest rates keep real rates firmly positive.

Krugman goes further: “The idea that the liquidity trap is temporary has shaped the analysis of both monetary and fiscal policy. ... [T]he real possibility that we’ve entered an era of secular stagnation requires a major rethinking of macroeconomic policy.” If monetary policy continues to be constrained by the ZLB, “we’d expect the world to look a lot more like that envisioned by Hansen than that envisioned by most macroeconomists during the Great Moderation era”.

Summers goes even further in summarising his chapter: “I explain why a decline in the full employment real interest rate (FERIR), coupled with low inflation, could indefinitely prevent the attainment of full employment. I argue that even if it were possible for the FERIR to be attained, this might involve substantial financial instability.”

Advanced economy central banks have demonstrated admirable creativity in overcoming the ZLB problem with their balance sheets. But raising central bank assets by several trillion dollars is not a trick that is going to work frequently – or at least vastly more research is needed if quantitative easing is to become the new *modus operandi* of G7 central banks.

- Fiscal policy may also need a rethink.

Krugman argues that temporary fiscal stimulus to support demand while the private sector gets back to spending normally may not be enough if negative natural rates are persistent. Koo argues that governments may have to provide stimulus for years to offset the drag of prolonged private-sector balance-sheet repair: “Any premature withdrawal of fiscal stimulus would unleash the deflationary forces as unborrowed savings are allowed to become a leakage in the economy’s income stream. Indeed, the US in 1937, Japan in 1997 and the UK and Eurozone in 2010 all experienced serious double-dip recessions when their governments pursued fiscal consolidation while their private sectors were still in the process of repairing balance sheets.”

4.1 Difficult but uncontroversial policy responses

The policy responses suggested by the authors form a rich and varied assemblage. There is, however, a set of policy that almost all would agree upon – the set of pro-growth policies that economists have urged for years. But this is not just old wine in new bottles. These policies take on a new hue when viewed through secular stagnation glasses.

The point rests on two simple premises. First, as most saving behaviour is slow moving, boosting investment is one way of eluding the ZLB. Second, Macro 101 tells us that the steady-state capital stock grows at the sum of the growth rates of productivity and labour inputs. Thus, policies that stimulate innovation and increase efficiency and those that boost hours worked will raise the natural rate and help us elude the ZLB problem.

For authors like Gordon and Glaeser, who are largely untroubled by negative natural rates and liquidity traps, pro-growth reforms are a good idea without any reference to secular stagnation. For those like Summers and Krugman who worry about systematic saving-investment mismatches, the reforms are especially meritorious since they build a buffer against the difficulty of pushing real rates below zero. The corresponding policy responses correspond to the first pillar of the Macro 101 frame in that they aim to raise economies' long-run growth potential. They include the following:

- Improving the education system.
- Investing in the physical infrastructure.
- Removing barriers for labour mobility between firms by trimming down employment protection legislation.
- Increasing incentives for low-skilled workers to participate on the labour market.
- Simplifying procedures for starting up businesses.
- Applying anti-monopoly policies to reduce the profit margins in new IT industries.

These new IT industries are characterised by large network externalities and hence low investment demand. Anti-monopoly policies increase the share of profits available for less monopolistic parts of the value chain, thereby enhancing investment demand.

A correlation of desiderata

These policies are usually clustered under the heading of 'structural reform' or supply-side policies, but they also help if the 'lack of effective demand' version of secular decline turns out to be correct. As Jimeno, Smets and Yiangou make the point: "The same policies that will help avoid secular stagnation in the future will help boost demand in the current environment. ... Investment is not only tomorrow's supply, but also today's demand."

4.2 Reforms requiring a policy rethink

Until just a few years ago, macroeconomic policymaking had settled on a clear received wisdom. Monetary policy should be run by politically independent, inflation-targeting central banks, and fiscal policy should be aimed at keeping debt and deficits within prudential limits. The consensus was shaken but not shattered when the US's Subprime Crisis metastasised into the Global Crisis in 2008. The only major amendments to the received wisdom were the addition of macroprudential policies and a firm concern about financial stability.

The dangers of secular stagnation – and the spectre of the US and Europe suffering Japan-like lost decades – lead some of the authors to propose bold challenges to the received wisdom. Perhaps the boldest is also the most logically straightforward (Krugman 2014, Blanchard et al. 2010). Summers explicitly backs this in his chapter.

- If the natural rate will frequently be negative, and policy rates are bound to the positive real line, why not raise the inflation target to, say, 4%?

The dreadful experience of the 1980s and the positive experience of the 1990s have shown that a stable inflation target yields high benefits. However, there are no good economic theories that run against an inflation target of 4% instead of 2%, while there are many good economic arguments in favour of a 4% target. Moving from 2% to 4% seems unlikely to undermine the credibility of the target as such. History has shown that monetary policy can stop inflation.

The main argument against moving the target is the German disgust at its 1923 hyperinflation. Germany's respect for its own history has made the world a better place to live in. It should therefore not be denounced lightly. Reflecting a view strongly held in parts of the Eurozone, Guntram Wolff writes: "I would advise against changing the ECB's inflation target ... for two reasons. For one, such a step would severely undermine trust in a young institution. ... It would constitute a break in the contract under which Germany subscribed to the monetary union. Second, changing the target

in current circumstances would be largely ineffective: already the current target will not be achieved in the relevant time horizon and a higher target would only increase this gap.” Eggertsson and Mehrotra dispute this second observation: “We find that a high enough inflation target can – if credible – always do away with the slump altogether as it accommodates a negative natural interest rate. Importantly, however, an inflation target which is below what is required has no effect in this context.”

Challenging the macroeconomic policymaking consensus is not the only controversial reform suggested by the authors as a redress or insurance against secular stagnation. Others include:

- Raising the retirement age.

The *paradox of ageing societies* is that – other things equal – real interest rates will be low, increasing the risk of bubbles. Hence, other things should not be kept constant. A higher retirement age reduces saving. There simply is a limit to the extent to which we can save today in exchange for leisure and high consumption tomorrow. Somebody has to do the work tomorrow; we cannot all be retired by that time.

- Extending PAYG public pensions and health care insurance systems, or if they are already there, enhancing their credibility.

This is particularly relevant for high-growth emerging economies like China and India. PAYG health care insurance has the additional advantage that it reduces the need for precautionary saving. Hence, it is more effective in reducing excess saving than PAYG pension systems.

- Conducting prolonged countercyclical fiscal policy.

This recommendation extends the previous one. Extending PAYG systems is equivalent to an implicit increase in public debt; fiscal policy is an explicit increase. Obviously, there is a sustainability limit. However, reductions in public debt can only be realised when there is no excess saving. In periods of excess saving, forced sovereign debt

reductions aggravate the problem (see Koo's vivid description of Japan's experience after its financial crisis in 1991).

- Revising the European Fiscal Stability Treaty.

The current version requires countries to reduce their public debt below 60% of GDP in 20 years. In some countries, this would require a massive tightening in a time of excess saving. The target for the structural deficit of 1% of GDP implies a long-run value of public debt between 25% and 33% of GDP, assuming the nominal growth of GDP to be between 3% and 4%. This low level of public debt would aggravate excess saving and lead to an acute shortage of save assets (see the chapter by Caballero and Farhi).

- Reducing policy uncertainty, as uncertainty enhances precautionary saving.

The debate on the debt ceiling in the US or the redenomination risk due to the threat of the break-up of the Eurozone, for example, add to uncertainty. The same applies to unrealistic fiscal rules (see the previous bullet).

- Revising regulations that force institution investors to invest in triple A assets.

This proposal is fleshed out in the chapter by Caballero and Farhi. As an example, the regulation in the US that pension wealth be fully annuitised at the date of retirement (applied likewise in several other countries) is both inefficient for the individual retiree (he would be better off if part of his wealth were invested in risky assets) and it distorts the risk-free rate downwardly (further aggravating the cost for the individual retiree).

- Not using monetary policy to avoid bubbles.

The fall in the real interest rate may well lead to bubbles. However, bubbles are not necessarily irrational. On the contrary, they might be a natural response of capital markets to a low real return on investment when fiscal policy does not respond to it. Hence:

- Addressing the excess saving, not fighting the bubbles.

Fighting bubbles keeps capital markets from balancing the supply and demand for loanable funds.

- Globalising financial markets.

While Japan and the North Atlantic economies may face diminishing returns on profitable investment opportunities, the world's capital-labour is very low compared to those of the G7 nations. Massive international capital flows have often ended in tears, but given that savings-investment imbalances are critical to the SecStag debate, the current account is one obvious solution mechanism.

Economies with excess savings

The final bullets reveal that policymakers in an economy with excess saving face a major dilemma.

- Either they set monetary policy to allow the interest rate to fall until the point at which rational bubbles emerge to absorb the excess saving, or
- they avoid the interest rate from falling that far by using fiscal policy for the absorption of the saving.

There are profound differences in the distributional impacts of the two. Using monetary policy favours the current owners of bubbly assets, predominantly the richer elderly; using fiscal policy allows for a broader spreading of the benefits. But trying to avoid this dilemma by picking neither of the two will lead to a failure of the capital market to clear and hence to a long, dragged-out Keynesian recession, as shown by Japan's experience since 1990.

Richard Koo observes that democracies might not be best equipped to handle this dilemma. “(T)he Chinese government implemented a 4 trillion RMB fiscal stimulus in November 2008 when it was facing a sharp fall in both domestic asset prices and exports. As a percentage of GDP, the stimulus was more than double the size of President Barak

Obama's \$787 billion package unleashed three months later. At that time, western observers were laughing when the Chinese government announced that they were going to maintain 8% growth. China's growth soon reached 12% and nobody was laughing." Handling a balance sheet recession requires centralised political power. Japan struggled for 20 years to find a workable solution. The fragmented decision-making process in Europe might cause even more difficulty in finding a way out.

5 Concluding comments

Is secular stagnation something to worry about, or just another passing fad? Will growth in the next decade or two be much lower than it was in the past? Predictions are hard to make, in particular about the future. However, the market offers a simple tell-tale: the level of the real interest rate. Nobody can reliably predict whether it will stay this low for the next decade. However, its current level is a clear sign of excess saving. For this situation, Eggertsson and Mehrotra have a simple piece of advice: "In line with the literature that emphasises deleveraging shocks that have short-term effects, we find that, in this economy, a long slump is one in which usual economic rules are stood on their head."

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