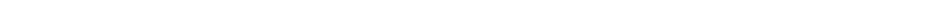


# **The Trading Dead**

The zombie firms plaguing Britain's economy, and what to do about them

Tom Papworth



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# Executive summary

1. In this paper, we identify five features of a zombie business:

- a. The company is heavily indebted
- b. The company is able to generate enough revenue to pay the interest on its loan but is not able to pay down the principle
- c. The ability to meet loan interest payments is dependent upon continuing low interest payments
- d. The above prevents the company from restructuring and so becoming more profitable
- e. The above vitiates the need for the company to go into receivership, thus preventing the redeployment of capital and labour to more productive sectors.

2. Over 200,000 UK businesses are now either struggling to pay their debts or having to negotiate with their creditors, while 108,000 businesses are only able to service interest on its debt but not the debt itself.

3. Corporate insolvencies are currently unusually low: The average failure rate

over the past quarter century has been 1.2%, but in the twelve months ending Q1 2013, the corporate failure rate has been just 0.7%. This is despite the fact that the UK economy continues to struggle. It is particularly low compared with the (much milder) recession of the early 1990s: during 1993 the liquidation rate peaked at 2.6%.

4. The UK's "productivity problem" may be partially attributable to the existence of zombie firms preventing capital and labour from reallocating to more productive activities and restricting the entry of new firms into the market. By both depressing prices and buoying up wages, zombie firms not only prevent the rationalisation that would have led some to bankruptcy and others to profitability; they also discourage new entries into the market and thus prevent innovation.

5. Monetary policy may be a significant cause of the zombie phenomenon. Just as the low interest rates made questionable investments seem viable, so the even looser credit regime introduced during the recession prevents these bad investments becoming exposed. On a macroeconomic level, efforts to prevent the recession by cutting interest rates and showing forbearance to struggling firms risk not only delaying (and exacerbating) the pain but also creating whole new classes of malinvestments.

6. Bank capital adequacy ratio regulations are another cause. These make banks reluctant to foreclose on debtors that cannot meet their obligations, because this will force them to "crystallise" (realise, value and mark down) the loss, thus worsening the liability side of their balance sheet. Banks are also less eager to roll over good loans or make new ones.

7. There is some evidence that zombie firms have been a factor in Japan's economic stagnation since the 1990s. Researchers have found notably slow productivity growth in the non-traded-goods sectors of Japan's economy (as these are the sectors insulated from international competition) and suggest that there is considerable scope for catch-up growth in these sectors which could have positive effects in the wider Japanese economy. However, they also note that this potential "can be tapped only if the most inefficient firms in these industries close down or undergo substantial restructuring and the remaining firms work to improve performance."

8. Some zombie firms can be resurrected, particularly those being failed by their

management and corporate structure. While creative destruction could usefully reallocate the firms human and capital resources, it may not be efficient to reallocate all of them when some could be retained in a more efficient or better-structured form of the firm.

9. The role of identifying firms ripe for restructuring should fall to entrepreneurs, such as investors and turnaround professionals, who can harness local knowledge of specific firms and markets in a decentralized, piecemeal fashion. Governments cannot identify which firms are worth turning around or how they might be saved because they cannot gather and hold all the (dispersed and exclusive) knowledge that would be needed to make such a judgement.

10. Existing research on zombie firm turnaround suggests seven key aspects to successful turnaround plans: Crisis stabilization, new leadership, stakeholder management, strategic focus, critical process improvements, organizational change and financial restructuring.

11. The appropriate response to recessio is not a public policy, economy-wide approach but one that is diffused, dispersed and embedded among entrepreneurs. It is for individual investors, owners and business leaders to decide which firms are worth trying to save and which should be quickly and efficiently liquidated.

# Introduction

*“Liquidate labor, liquidate stocks, liquidate farmers, liquidate real estate... it will purge the rottenness out of the system. High costs of living and high living will come down. People will work harder, live a more moral life. Values will be adjusted, and enterprising people will pick up from less competent people.”*

– Andrew W. Mellon, Secretary to the Treasury<sup>1</sup>

*“The whole point of monetary loosening at the moment [is] to keep companies who have a viable long-term future in business while demand is temporarily weak ... So I don't think we should see this as particularly alarming... There is an element to which some of it may be more worrying for the longer term. But trying to disentangle those two effects is very difficult to do.”*

– Spencer Dale, Chief Economist, Bank of England<sup>2</sup>

## Structure of the report

Chapter 1 will define what we mean by a “Zombie Company”. We will look at the

1. Herbert Hoover (1952). *Memoirs*. Hollis and Carter. p. 30
2. The quote is an amalgam of two statements, taken from *Central banks face zombie nightmare*, *Financial Times*, 8 January 2013, and *Zombie companies stalk UK economy*, *Financial Times*, 18 November 2012



origins of the term and how the use differs in the UK. We will then set out our own definition that centres on the fact that the firm is heavily indebted, able to pay the interest on its loan but not the principle, that the ability to meet loan interest payments is dependent upon continuing low interest payments, that this prevents the company from restructuring and so becoming more profitable, and that at the same time it vitiates the need for the company to go into receivership, thus preventing the redeployment of capital and labour to more productive sectors. We will also distinguish different categories of firm that meet these criteria and identify which are the cause for concern in the economy.

Having established what we mean by a zombie, chapter 2 will examine evidence for the zombie phenomenon in the UK economy. This will focus on three sources of evidence. Firstly, we will look at work by the insolvency trade association R3, which has recently begun to produce estimates of the number of zombie firms in the UK economy using survey evidence. We will then move on to look at two features of the UK economy during the Great Recession that have “puzzled” economists. Our second source of evidence will be the “Insolvency Puzzle” – the fact that corporate insolvencies have been at a historic low in recent years and that even during the recession the rate of insolvencies has been lower than during earlier periods of growth. The third piece of evidence will be the “Productivity Puzzle” whereby the recent recession has been characterised by a relatively low level of unemployment and a relatively high decline in individual and corporate productivity.

Chapter 3 will consider the economics of recession and recovery and how these have brought about the existence of zombie firms. We will consider how economic booms – especially those caused by interest-rate manipulation – can lead to malinvestments that misallocate resources. Recessions can therefore be seen not simply as painful crises but as cathartic periods where resources are reallocated to more productive uses. Having discussed the role played by insolvency and the reallocation of factors of production we will then look at how government action to avoid the painful but necessary ramifications of recessions – situations caused and made necessary by the actions of policy-makers themselves – create an environment where zombies thrive. We note further that government policies to stabilise banks exacerbate this problem.

Having established the economic theory behind the phenomenon, we will examine the economic impact of zombie firms in practice. Chapter 4 will look at the work of Austrian economist Joseph Schumpeter and the concept of “Creative

Destruction”. We will use both theory and empirical evidence to show that creative destruction is a real phenomenon, that it is fundamental to growth, and that the zombie phenomenon retards that process. In Chapter 5 we will look in depth at the quintessential example of a “zombie economy”, examining Japan during its two lost decades from 1990 to 2010. Japan is useful for a three reasons: it is one of the few places where examination of the zombie phenomenon is examined in peer-reviewed academic journals; these provide clear empirical evidence for the existence of zombies; and they show very clearly the damage that zombies can wreak on a once-thriving economy. We can therefore provide a very robust examination of the impact of zombie firms on an economy. To complement the Japanese example, in Chapter 6, we will look briefly at another example of zombie economy: the airline sector in the United States.

Chapters 3 to 6 provide clear evidence that zombie firms should be allowed to go into administration so as to reallocate factors of production to more productive uses, and demonstrate that efforts to retard that process are damaging and deeply misguided. Chapter 7 will challenge that view, examining how some zombie firms can be saved. Not every zombie firm is a profitless husk best put out of its misery. Some firms are capable of returning to profitability if the right management is put in place and the firms are properly restructured. This paper argues that there is an important role for entrepreneurs in identifying zombie companies that can be saved. Crucially, this rests on knowledge that is diffused and tacit; as such, this is not a role that can be taken over or imitated by governments. What is more, such “turnarounds” involve substantial risk, and it is right that these risks involve private investors putting their own money on the line; there can be no return to the bad old days when government poured billions of pounds of taxpayer money into trying to save failing firms.

We conclude by summarising our findings and setting out possible policy solutions.

# 1. What are the ‘Zombies’?

## Defining the “Zombie Firm”

The use of “Zombie” as an economic descriptor has become fashionable in recent years. It appears to have been first coined by Edward Kane, Professor of Finance at Boston College, during the American Savings & Loan crisis of the 1980s. In September 2008 he defined the term in reference to a firm that “would be put in its grave by its creditors if it weren’t for the black magic of government credit support guarantees and loans”. In 2012 he provided the following definition:

*What is a Zombie Firm?*

*An institution becomes economically insolvent when it sustains losses that drive the realistic value of its assets below the value of its liabilities. A zombie institution is a deeply insolvent firm that continues to operate only because its ability to cover its various obligations is shored up by implicit or explicit government credit support.<sup>3</sup>*

The use of the term in the UK in the wake of the financial crisis of 2007-8 is somewhat different from Kane’s, however. Firstly, Kane’s original prescription applied to banks

3. Edward J. Kane, “Gaps and Wishful Thinking in the Theory and Practice of Central-Bank Policymaking”, presentation to the 30th SUERF Colloquium - States, Banks, and the Financing of the Economy, Switzerland, 6 September 2012.

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rather than firms more generally. By comparison, in UK usage zombies are not necessarily financial entities. Though there are zombie banks, the banks are usually those breathing life into these otherwise-dead firms through “forbearance,” the act of refraining from enforcing a debt repayment when it falls due.

Secondly, Kane’s definition focuses on “implicit or explicit government credit support”.

*Were it not for creditors’ confidence in government support, the firm would experience a run-off in funding that would force it into a corporate grave. But a fatally injured firm can operate as a zombie indefinitely, as long as political arrangements are strong enough to force citizens to pony up the taxes required to support it.*<sup>4</sup>

The role of government is not universally acknowledged as a key feature of the zombie phenomenon. For most UK commentators, whether the creditor is the government or a private entity is immaterial. However, it may not be unrelated that even private creditors have proven to be implicitly (and are now explicitly) backed by government guarantee, what Kane refers to as “an unacknowledged contra-liability: a coercive taxpayer put from expected crisis-management policy.” The role of government guarantee (even at one remove) in creating or exacerbating the zombie phenomenon is one to which we will return in chapter 3.

In the UK, the term “zombie” is generally applied to “a company only able to service interest on its debt but not the debt itself”, or one that is able to survive only because of favourable credit terms.<sup>5</sup> These two states are obviously closely linked. Ian Stewart, Deloitte’s Chief Economist in the UK, describes them as “weak, possibly loss making companies, which are able to survive thanks to low interest rates and a supposedly more tolerant attitude to corporate borrowers on the part of banks.”<sup>6</sup> Mark Thomas, Head of Strategy at PA Consulting and author of *The Zombie Economy*, an analysis of the Great Recession published in 2009 that focussed on the zombie phenomenon, told the BBC that “A zombie company is one which is

4. Edward J. Kane, “Gaps and Wishful Thinking in the Theory and Practice of Central-Bank Policymaking”, *op cit*.

5. “Are zombies really attacking the UK economy?”, R3, January 2013.

6. Deloitte Monday Briefing: *Zombie Companies*, [http://www.deloitte.com/view/en\\_RO/ro/industries/financial-services/9b9475a213d3b310VgnVCM2000003356f70aRCRD.htm](http://www.deloitte.com/view/en_RO/ro/industries/financial-services/9b9475a213d3b310VgnVCM2000003356f70aRCRD.htm).

generating just about enough cash to service its debt, so the bank is not obliged to pull the plug on the loan... The company can limp along, it can survive, but it hasn't got enough money to invest.”<sup>7</sup>

Mr Thomas identifies zombies in all four sectors of the economy: banks, businesses, governments and consumers. The focus of this paper is primarily on zombie businesses. While this category could include financial institutions, these are to some extent the cause as well as the effect of the problem.

In this paper, we identify five features of a zombie business:

1. The company is heavily indebted
2. The company is able to generate enough revenue to pay the interest on its loan but is not able to pay down the principle
3. The ability to meet loan interest payments is dependent upon continuing low interest payments
4. The above prevents the company from restructuring and so becoming more profitable
5. The above vitiates the need for the company to go into receivership, thus preventing the redeployment of capital and labour to more productive sectors.

Distinguishing different kinds of zombie

It is important to understand that the above definitions and descriptions include a host of different companies with very different financial circumstances and future prospects. The fact that a firm is currently unable to generate sufficient revenue to meet more than the interest on its debts could be evidence of any one of at least four factors:

- The firm is unprofitable (because either the firm or the sector is in long-term decline) and the emergence of low interest rates has simply delayed its eventual exit from the market;

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7. “‘Zombie’ companies eating away at economic growth”, BBC Online, 13 November 2012.

- The firm is at an early stage of development and has not yet reached the stage where it turns a profit;
- The firm is suffering from the cyclical downturn and will return to robust health once the economy recovers;
- The firm is struggling due to management practices or a corporate structure that is not (or is no longer) fit for purpose.

The first category is made up of firms that would, in normal times, face bankruptcy. It is only low interest rates that are keeping these firms alive. As we shall see in chapters 3 to 6, the zombie phenomenon prevents the reallocation of resources (both capital and labour) from these failing firms to more productive uses.

Many early-stage companies trade for years without turning a profit, but this is a natural process as they scale up their business, identify and develop markets, and refine their product or service. For many of these, the emergence of low interest rates may be a blessing, making the necessary period of early-stage growth easier (though against that one must acknowledge that the cause of the low interest rates is likely to be an economic slowdown which will have the reverse effect on their growth). To terminate these firms in a misguided belief that capital and labour needs to be reallocated would be to kill the next generation of firms and undermine the process of creative destruction (see chapter 4).

Equally, many firms that are perfectly profitable in normal markets will struggle during a downturn. But it does not follow that these firms should necessarily be liquidated and input-factors reallocated. In fact, it is the whole purpose of low interest rates that they enable these firms to ride out the bad times so that they can return to profitability come the recovery. Whilst booms characterised by bubbles of the types seen in the previous decade inevitably lead to the misallocation of factors of production, and the liquidation of these malinvestments is vital and healthy (see chapter 3), those firms where malinvestments have not taken place, but which are suffering collateral damage from the macroeconomic downturn, need to survive so as to act as the engines of the recovery once the economy has restructured. Indeed, it is axiomatic that if capital and labour is to be reallocated, it has to be reallocated to somewhere as well as to be reallocated from somewhere. Start-ups, companies at the high-growth early stages and those that are merely suffering from a cyclical downturn are exactly those firms that could benefit from the reallocation of capital

from those zombies with no future.

The fourth group consists of firms the future of which depends upon active efforts to tackle business failure so that companies are capable of meeting the demands of a changed market. Zombie economies both create and mask a whole category of businesses the long term future of which is in doubt. Firms that are poorly structured, badly run or are carrying loss-making arms are able to avoid restructuring due to the super-normal profits that result during the exuberant booms that proceed economic crises. Once the recession begins, many of these firms face crises. But if the response of political decision-makers to the macro-economic crisis is to slash interest rates so as to stimulate a recovery or to engineer a “soft landing”, the result can be that these unprofitable firms are able to stagger on. This provides both a threat and an opportunity. The threat, as mentioned above and explored in more detail in chapters 3 to 6, is that their survival prevents resources from being reallocated and so slows the recovery. The opportunity, which we will consider in more detail in chapter 7, is that it provides a breathing space during which restructuring and turnaround experts can step in to make the firm more profitable.

In many ways, this scenario is the best of both worlds. On the one hand, low interest rates and creditor-forgiveness prevent or at least delay mass redundancies and so prevent the recession from biting too deep. On the other, an opportunity is created to reallocate capital and labour to more profitable uses (including freeing those factors retained within the firm to become profitable again). In the process it provides us with a route through which the zombie phenomenon can be seen not as a drag on economic recovery but as an important stage in that recovery process.

As these four very different circumstances make clear, the assumption that all these types of firm are beyond saving and that it would be economically efficient to hurry their eventual death is premature. Thus, despite our earlier definition, we believe that at least the second and probably the third categories of firms should be excluded from the description “zombie company”. It is not firms with a bright future that are the zombies that are threatening economic recovery but those with no future or whose future depends on significant intervention.

## 2. Evidence for the zombie phenomenon in the UK economy

Identifying Zombie businesses is not easy. The above definitions are imprecise and can include both viable firms experiencing a period of difficulty and companies with no long term future. Thus estimating the number of zombie businesses is problematic.

One attempt at an estimate is provided by R3, the Association of Business Recovery Professionals, which represents individuals and organisations that work to turn around struggling businesses. R3 tracks four signs of struggling businesses:

- Just paying the interest on debts (and not the debt itself)
- Unable to repay debts if interest rates increase by a small amount
- Having to negotiate payment terms with creditors
- Struggling to pay debts when they fall due.

These have shown a mixed picture over the past year. The number of those only



paying the interest on their debts (our headline definition of a zombie) has fallen, and the number unable to repay debts if interest rates increase by a small amount has fallen to less than half the 2012 rate. But the numbers having to negotiate payment terms with creditors, and those struggling to pay debts when they fall due, have risen over the past year.

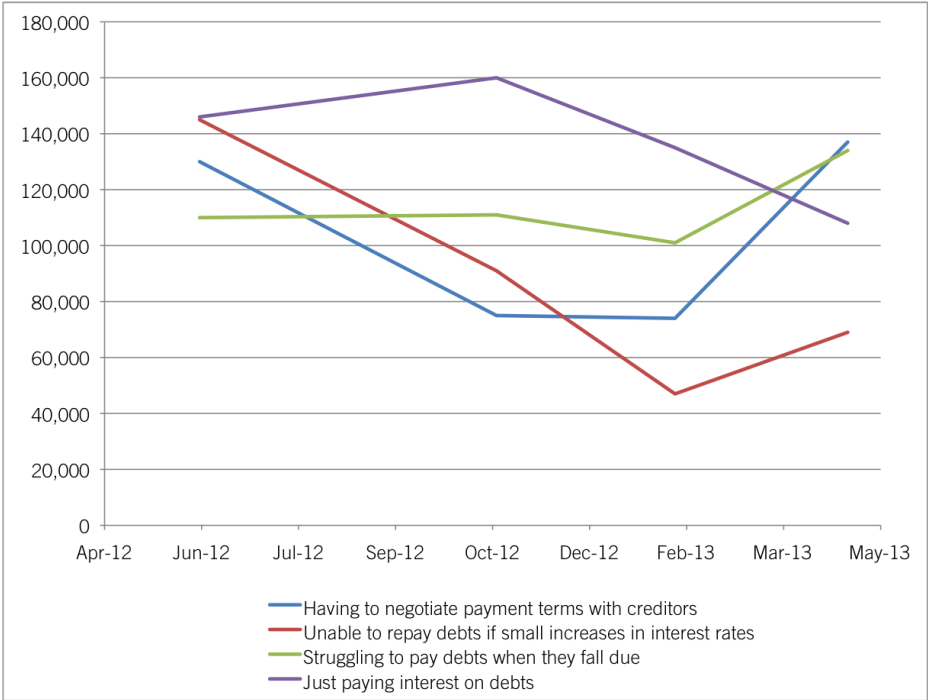


Figure 1: R3 estimate of the number of businesses reporting signs of distress, year to May 2013<sup>8</sup>

8 “The ‘zombie businesses’ phenomenon: An update”, R3, June 2013.

	June 2012	November 2012	February 2013	May 2013
Having to negotiate payment terms with creditors	130,000	75,000	74,000	137,000
Unable to repay debts if small increases in interest rates	145,000	91,000	47,000	69,000
Struggling to pay debts when they fall due	110,000	111,000	101,000	134,000
Just paying interest on debts	146,000	160,000	135,000	108,000

*R3 estimate of the number of businesses reporting signs of distress, year to May 2013*

In total, “over 200,000 UK businesses are now either struggling to pay their debts or having to negotiate with their creditors,” while 108,000 businesses are “only able to service interest on its debt but not the debt itself”.

## The insolvency puzzle

The above represents an attempt to count zombie companies by surveying businesses. Another way to explore whether there are likely to be zombies in the economy is to consider what has happened to corporate insolvencies. If insolvencies were unusually low this might suggest that some factor was at play that was keeping them afloat. While in normal times this might be evidence of good economic conditions, in a recession this might suggest that policy was actively propping up firms that would otherwise go to the wall.

In light of this, it is notable that the rate of corporate insolvencies is low by historical standards. The average failure rate over the past quarter century has been 1.2%, but in the twelve months ending Q1 2013, the corporate failure rate has been just 0.7%. This despite the fact that the UK economy continues to struggle. It is particularly low compared with the (much milder) recession of the early 1990s: during 1993 the liquidation rate peaked at 2.6%.<sup>9</sup> Figure 1 shows the historical

*9. Insolvency Statistics, The Insolvency Service, Reference Ins13/Coms/070, 03 May 2013, downloaded 26 July 2013. The Insolvency Service notes also that “the number of active companies has changed considerably over this period; there were 2.6 million active registered companies in Q1 2013; this compares with only*

trend in corporate (and individual) insolvencies since 1986.

The above is often used to highlight the unusually low rate of insolvencies during the current recession. Recent years appear very low compared to the two peaks around 1986-7 and 1993, and even compared with the average for the three decades depicted in Figure 1. However, if we look at Figure 2, which provides a more detailed picture of the past decade, we can see that the rate of corporate insolvencies has been higher following the financial crisis of 2008 than it was prior to it, and the rate remains above the ten year average. Figure 1 also shows that there was a substantial change in the period 2003-5 that led to a new, lower average rate of insolvencies.

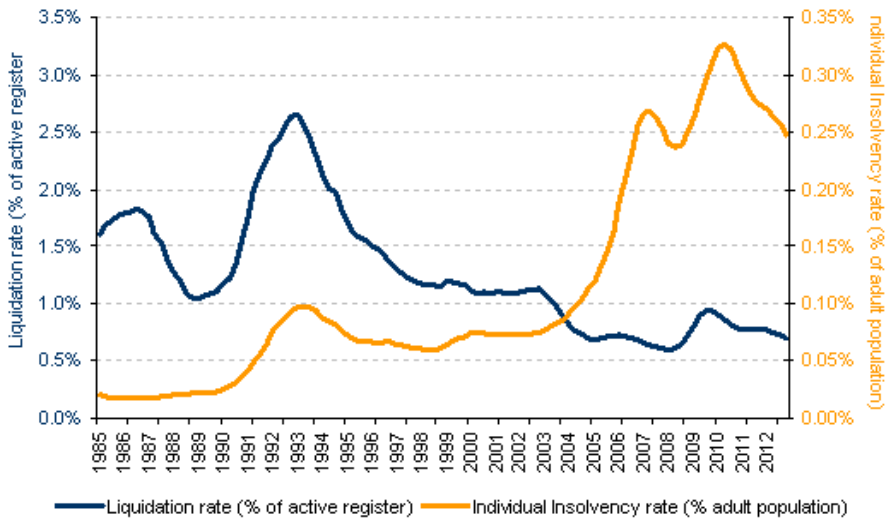


Figure 2: Company Liquidation and Individual Insolvency Rates in England & Wales<sup>10</sup>

about 900,000 in the early 1990s and less than 800,000 in 1986.”

10. *Insolvency Statistics*, The Insolvency Service, *ibid*.

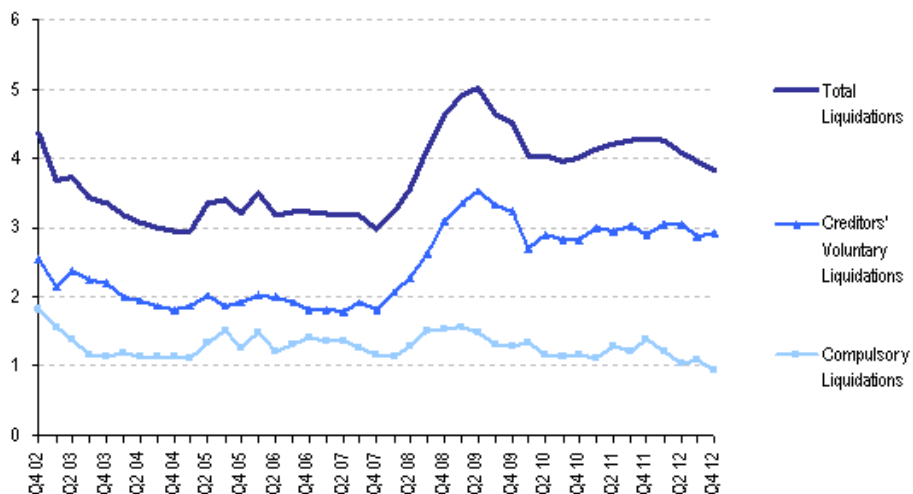


Figure 2: Company Liquidations in England & Wales by quarter, 2003-2013 (Thousands, seasonally adjusted)<sup>11</sup>

Three further features stand out. Firstly, the increase in the number of insolvencies since the onset of the recession in 2008 is entirely down to an increase in the number of Creditor Voluntary Liquidations, where companies agree to wind themselves up (subject to the approval of a creditors' meeting). The number of compulsory liquidations, where a creditor, shareholder or director gets a court order requiring that the company be wound up, have remained largely flat throughout the decade and barely fluctuated even at the height of the recession in 2008-9. This lends weight to the suggestion, which we will make in chapter 3, that banks and creditors are showing an unusual level of forbearance.

Second, the total number of insolvencies did shoot up during the recession and remains at an elevated level. The significant change in the period 2003-5 that created a lower trend rate of insolvencies suggests that concerns that insolvencies are low during the current recession may be misplaced. For example, R3 state that "Corporate insolvency rates remain historically low, especially when contrasted with previous recessions... This surely reflects this longer period of low growth that is the new norm, with low interest rates and low liquidation rates, but many businesses running at a loss."<sup>12</sup> It certainly reflects something, but whether it is reflective of a new norm post 2008, as R3 suggests, or a recession within a new norm post 2003

11. *Insolvency Statistics, The Insolvency Service, op cit.*

12. *Are zombies really attacking the UK economy?, R3, January 2013.*

is less clear.

Third, while there clearly was an increase in insolvencies following the crisis of 2008, the past year has seen the numbers beginning to fall towards the pre-recession trend. Figures for Q1 2013 show a decrease of 5.3% on the previous quarter and are 15.8% less than the same quarter a year ago. While this is still above the pre-recession trend, it suggests that the number of insolvencies is returning to normal even though the economy remains in the doldrums.

## The productivity puzzle

Another way of identifying whether the zombie phenomenon is real is to consider productivity. Zombie firms are characterised by low productivity – as we shall see in chapter 5, productivity growth of zombie firms tends to be very low at best, and even negative, for many years. Thus an economy that exhibited a high level of zombiism would be expected to show low or negative productivity growth. Evidence for the UK economy supports such a hypothesis.

According to a study by the Institute for Fiscal Studies (IFS), employment in the UK has never been higher; there are more people in employment now than before the recession.<sup>13</sup> Yet UK output is substantially lower. This contrasts with the experience in previous recessions, where employment was slow to bounce back but where productivity quickly recovered. As a consequence, measured real output per hour was 2.6% lower in the third quarter of 2012 than it was four and a half years earlier, and 12.8% below its pre-recession trend, and output per worker is similarly down.<sup>14</sup>

The cause of the productivity puzzle continues to be debated. The IFS identifies eight features of the current UK economy that affect UK productivity (both positively and negatively). Of these, one stands out as strongly supporting the suggestion that the UK is affected by zombie companies. They report that

*The movement of capital to high-productivity projects may have been inhibited by a combination of bank forbearance and financing constraints that reduce the exit of low-productivity firms and restrict the entry of new firms. Aggregate*

13. Richard Disney, Wenchao Jin and Helen Miller, “Productivity Puzzles”, *The IFS Green Budget 2013, Chapter 3, Institute for Fiscal Studies, London 2013.*

14. *The significance of output per hour, as opposed to output per worker, is that it adjusts for part-time work.*

*labour productivity will be adversely affected during any period of capital adjustment.*<sup>15</sup>

This is important because it supports a number of our claims around the causes and effects of the zombie phenomenon. Firstly, we argue in chapters 3 and 5 that bank forbearance is responsible for the zombie phenomenon. Secondly, in chapters 4 and 5 we find that the presence of zombies prevents the process of creative destruction and retards economic progress. Thirdly, in chapters 3 and 5 we suggest that zombie firms cause labour to be retained in unproductive firms when they could more usefully be reallocated to more productive enterprises. It is to these arguments, and the wider economic context of the zombie phenomenon, that we now turn.

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15. “Productivity Puzzles”, *The IFS Green Budget 2013*, *op cit.*

### 3. The function of recessions and the causes of zombiism

To understand why the existence of zombie firms is problematic requires an understanding of business cycles. To understand what causes the rise of zombie firms in the first place, we need to look at how governments respond to economic downturns. This will lead to a very profound conclusion: the policies that cause economic booms and busts help create zombie firms. The way that politicians respond to recessions also helps create zombie firms. And once in recession, both politicians and banks are reluctant to expose the zombies for what they are.

#### **The economic context of zombiism**

It is common to view recessions as a problem to which a return to the status quo ante is the solution. The period of downturn is contrasted with the previous good times – a comparison that is particularly stark because the period immediately prior to the recession is frequently one that feels particularly bountiful. This perception could not be more wrong. In reality, the feeling of exuberance and apparent bounty that precedes a recession results from policy mistakes (in both the private and public sectors) that lead to increased investments in projects not all of which are in reality viable. This creates an unsustainable boom from which the economy will soon crash. The recession that follows is the inevitable period of dislocation that results as the economy sharply adjusts to the realisation that the structure

of investment and employment does not in fact reflect the underlying economic fundamentals. Put simply, boom begets bust.

This description of the role of unsustainable (and artificially manufactured) booms in causing recessions is controversial. Both neoclassical economists and those in the Keynesian tradition question the significance of the boom in laying the groundwork for the bust, and even question the existence of the boom as such (if, by boom, one means an unsustainable period of above-trend growth). Consider, for example, the aridness of Arthur Okun's definition of a "boom" as a period when the economy is growing at a rate above its long-run trend, while a "recession" is a period when the economy is growing at a rate below its long-run trend (not, note, even a period of "negative growth" but merely one where growth is slower than usual).<sup>16</sup>

From a neoclassical perspective, busts are caused by negative exogenous shocks, while Keynesians attribute recessions to a slump in aggregate demand. There are substantial problems with these explanations, however, and it is our view that an explanation that places the cause of the recession firmly in the policies that created the previous period of above-trend growth more accurately reflects the context of the boom and bust cycle of the decade centred on 2007-8.

Typically, booms are characterised (and indeed fuelled) by a sharp expansion in the supply of credit. This may result from a belief among financial institutions that there is an increasing opportunity for profitable investment – neoclassical economists might point to a positive exogenous shock, as for example a revolution in communications technology that greatly lowers transaction costs, or the arrival of half a billion new industrial workers in the global economy. More often, it is driven by central bank interventions, as when central bank governors promise to lower interest rates every time the markets dip.

The impact of this expansion of credit was explained by the Austrian economist Ludwig von Mises in 1936:

*The lowering of the rate of interest stimulates economic activity. Projects which would not have been thought "profitable" if the rate of interest had not been influenced by the manipulations of the banks, and which, therefore, would not have been undertaken, are nevertheless found "profitable" and*

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16. Arthur Okun, *Prices and Quantities: A Macroeconomic Analysis*, Brookings Institution Press, 1981.



*can be initiated. The more active state of business leads to increased demand for production materials and for labor. The prices of the means of production and the wages of labor rise, and the increase in wages leads, in turn, to an increase in prices of consumption goods.*<sup>17</sup>

Ultimately, these investments must not only be financed but must also be funded. Funding (paying for investment in the long term) must always come from sales of goods or services; in the end, everything is funded by households.<sup>18</sup> Unfortunately, the advent of easy credit confuses the price signals that markets transmit and give entrepreneurs false readings, making it more difficult for them to determine which investments are likely to yield a return in the future and which are not. Have interest rates fallen because people's time preferences have changed or because central banks have interfered? Does the return on my investment enable me to meet my repayments and still make a profit, or are current interest rates unsustainable, meaning that my loan repayments will rise above the rate of return before the project is complete? Can customers really afford my product, or are they, too, living beyond their means? It becomes increasingly difficult to distinguish between good and bad ("mal-") investments.

Eventually reality bites. Realising that they are overexposed, banks begin to rein in lending. As David Simpson puts it:

*A period of credit contraction then sets in, accompanied by a remedial recession in real economic activity in which the losses of those who have made the least prudent investments are exposed. Note the adjective 'remedial': it is the recession, however painful, which is the recovery phase of the economic cycle. It is only in the recession that earlier wrong investments are exposed and corrected.*<sup>19</sup>

17. Ludwig von Mises, "The 'Austrian' Theory of the Trade Cycle", in Richard M. Ebling (ed.), *The Austrian Theory of the Trade Cycle and Other Essays*, Mises Institute, Auburn, Alabama, 1996.

18. *Everything is funded by households, but not necessarily through consumption. The other way that households can be made to fund investment is through taxation. In normal times, this route is not available to private enterprises, of course, but one might argue that this is exactly what happens when governments bail out firms that have made bad investments using taxpayers' money.*

19. David Simpson, *The Recession: Causes and cures*, Adam Smith Institute, 2009, p11.

Mr Simpson's description of the causes of recessions is extremely useful, but we would dispute the suggestion that it is only "those who have made the least prudent investments" who are exposed to risk when the banks begin to tighten credit conditions. Banks are no better than other entrepreneurs at distinguishing which investments are sound and which are not, so they tighten credit conditions for all borrowers – including those businesses that do have a sound business model and (at least in normal conditions) a marketable product.

The above is of enormous relevance to our consideration of zombie companies. In chapter 1 we distinguished between four different types of zombie:

1. Firms that are in the long run unprofitable;
2. Firms that are at an early stage of development;
3. Firms that are suffering from the cyclical downturn but have the potential to return to profitability;
4. Firms that are struggling due to poor management practices or a corporate structure.

In a model economy where the market rate of interest is equal to the natural rate these four types of firm would experience very different credit conditions. The first would struggle to find any finance except short term, high cost loans. The fourth might have a similar experience. The second would rely mainly on angel investors and venture capital, while the third might receive more favourable lending. But in an economic boom, it may be more difficult to distinguish between 1, 3 and 4 (and even the early stage company may find banks more willing to lend than normal). With credit not only directly increasing household consumption but also leading to increased wages and falling unemployment, firms that are in the long run unprofitable or are struggling due to poor management practices or corporate structure may still be able to turn a profit. In such a boom it is difficult to distinguish between those firms that are in the long run doomed and those that could be turned around with the right leadership, let alone between these two and the firms that are sound but are suffering from the cyclical downturn.

Left to run their course, recessions are when those hidden differences become apparent. As Mises explains:

*Many enterprises or business endeavors which had been launched thanks to the artificial lowering of the interest rate, and which had been sustained thanks to the equally artificial increase of prices, no longer appear profitable. Prices collapse; crisis and depression follow the boom. The crisis and the ensuing period of depression are the culmination of the period of unjustified investment brought about by the extension of credit. The projects which owe their existence to the fact that they once appeared “profitable” in the artificial conditions created on the market by the extension of credit and the increase in prices which resulted from it, have ceased to be “profitable.” The capital invested in these enterprises is lost to the extent that it is locked in. The economy must adapt itself to these losses and to the situation that they bring about.<sup>20</sup>*

Unfortunately, these periods of adjustment are long and painful: resources (both human and capital) have to be reallocated away from unprofitable investments and to more productive parts of the economy. It is painful for investors because, in Mises words, capital is frequently “locked in” and so cannot be easily or fully reallocated. Over time, a factory can be cleared of the machinery that made CD players and filled with machines that make MP3 players, but while that changeover is taking place the owner of the factory will not earn any money, while the owner of the machines that made the CD players will be unable to redeploy that capital at all. Workers face an even more painful transition in that they frequently have to take lower wages, or go through a period of unemployment, until they can learn new skills, and workers are more likely to rely upon their job for their entire living (indeed, for their household income). Nonetheless, recessions are a vital period of catharsis, as resources are reallocated from unproductive to productive parts of the economy.

## **Causes of the zombie phenomenon**

The above analysis provides a clear understanding of the causes of corporate zombiism. Zombie firms are created by the business cycle and in particular the policies that shape it.

At a political level, it is efforts to boost aggregate demand through credit expansion, and in particular through lowering interest rates, that encourages investment in projects that would not otherwise appear viable. This is then compounded by the

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20. Ludwig von Mises, “The ‘Austrian’ Theory of the Trade Cycle”, *op cit*.

policy reaction when the recession sets in. Attempts to “avoid the recession” or “engineer a soft landing” lead governments to lower interest rates further and boost credit through other, less conventional, means. The £375 billion quantitative easing in the UK, for example, was intended specifically to encourage lending by UK financial institutions. Just as the low interest rates made questionable investments seem viable, so the even looser credit regime introduced during the recession prevents these bad investments becoming exposed. To return to our definition from chapter 1, it becomes relatively easy for these firms to meet their not-very-demanding interest payments. As we saw in chapter 2, this is taken as a sign of successful government policy, as insolvencies and job losses are kept to a minimum.

Government is not alone in creating this problem. Financial institutions are also guilty of creating and preserving zombie firms. At the very least, they are the willing agents of government policy. During the boom period, banks are keen to expand their loan books as much as possible, and tend to ignore the risk (arguably the inevitability) that they will eventually be exposed to losses.<sup>21</sup> As former Citigroup chief executive Chuck Prince notoriously told the Financial Times, “When the music stops, in terms of liquidity, things will be complicated. But as long as the music is playing, you’ve got to get up and dance. We’re still dancing,” he told the FT in June 2007.<sup>22</sup>

Once the recession sets in, the banks then face enormous pressure not to liquidate firms. From a business perspective, having a debtor that can pay their interest is not a terrible thing: on the one hand, the bank still has an income; on the other, it never has to actually mark down the loss on its loan book. Continually rolling the loan over – an act known in financial circles as “forbearance” – makes sense. To cite an old banking joke, “A rolling loan gathers no loss”. And this is in fact what we have seen: as noted in chapter 2, the number of compulsory liquidations have remained largely flat throughout the decade, even at the height of the recession in 2008-9. Financial institutions have proven reluctant to drive uncreditworthy borrowers into

*21. In this report we are guilty of treating “banks” and “financial institutions” as synonymous. It is most definitely not the case that all financial institutions involved in corporate lending are banks. On the other hand, many of the features we concentrate on are applicable to all financial institutions. To avoid repeated use of the term “financial institutions”, however, we have used the term “banks” in this context.*

*22. “Citigroup chief stays bullish on buy-outs”, Financial Times, 9 June 2007, <http://www.ft.com/cms/s/0/80e2987a-2e50-11dc-821c-0000779fd2ac.html>.*

bankruptcy.

There are good reasons to believe that governments must share some of the blame for the practice of the banks as well, however. There are at least two reasons for this on top of the general point that the interest rate set by the central banks strongly influence the rates offered by commercial banks. The first is the (previously implicit but now explicit) financial guarantee offered by governments to commercial banks. Lehman Brothers notwithstanding, governments are not willing to allow banks to go bankrupt and will step in to bail them out if they get into trouble. The long list of bailed-out UK financial institutions, of which RBS and HBOS/Lloyds are only the most prominent, stands testimony to this fact. What cannot be ignored is that this creates substantial moral hazard: put simply, is it any wonder that Chuck Prince continues to play musical chairs when he knows that, once the music stops, the taxpayer will be forced to buy enough furniture for everybody to take a seat.

The other intervention that affects how banks behave is the strict “capital adequacy ratios” that governments impose (precisely to avoid the above situations arising). Governments mandate the minimum quantity of capital that banks must have in comparison to the size of their loan books, to ensure a sufficient buffer exists for the bank to be able to cover any losses. The most well-known examples of these are the Basel Accords. This is understandable and in many respects desirable. However, it does have at least one perverse outcome. In the event of a crisis, banks are reluctant to foreclose on debtors who cannot meet their obligations because this will force them to “crystallise” (realise, value and mark down) the loss, thus worsening the liability side of their balance sheet. Secondly, they are less eager to roll over good loans or make new ones. Thus, capital adequacy ratios force banks into practices that retard, rather than encouraging, growth.

As Caballero, Hoshi and Kashyap explain in an article in the American Economic Review:

*[W]hen banks wanted to call in a nonperforming loan, they were likely to have to write off existing capital, which in turn pushed them up against the minimum capital levels. The fear of falling below the capital standards led many banks to continue to extend credit to insolvent borrowers, gambling that somehow these firms would recover or that the government would bail them out.<sup>23</sup>*

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23. Caballero, Hoshi and Kashyap, “Zombie Lending and Depressed Restructur-

An additional cause was concern among the banks about the impact that foreclosing on insolvent or barely solvent debtors would have on public opinion. In a story familiar to observers of the Great Recession in the West:

*Failing to roll over the loans also would have sparked public criticism that banks were worsening the recession by denying credit to needy corporations. Indeed, the government also encouraged the banks to increase their lending to small and medium-sized firms to ease the apparent “credit crunch”.<sup>24</sup>*

This rhetorical pressure is expressed in public discourse – in political speeches and newspaper editorials – rather than in legislation. The ongoing demonization of bankers and the perpetual blaming of them for the woes of (especially small and medium sized) businesses applies pressure on them not to crystallise losses, not to foreclose on even failing firms, and to shore up their nominal assets so that they are able to offer additional loans.

Banks thus face a powerful regulatory and public-opinion incentives to keep zombies afloat even if they have no viable future. This perpetuates the zombie phenomenon and keeps the easy credit bandwagon rolling.

### **The effects of avoiding the realities of recession**

The above policies are understandable given that recessions last a long time and are deeply unpleasant.<sup>25</sup> Nonetheless, the effect of these policies is to prevent or lessen the reallocation of resources that is necessary to shift the economy back onto a growth path. On a macroeconomic level, efforts to prevent the recession by cutting

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*ing in Japan”, American Economic Review, 2008, 98:5, 1943–1977, <http://www.aeaweb.org/articles.php?doi=10.1257/aer.98.5.1943>.*

24. Caballero, Hoshi and Kashyap, *op cit*.

25. *It is common to refer to the situation that has obtained since 2008 as “the recession” or even “The Great Recession.” According to the technical, macroeconomic definition of a recession used by governments and statistical agencies, a recession is a continuous period of negative growth lasting for at least two quarters. By this definition the Great Recession was in fact over by the end of 2009. However, subsequent low growth and the fact that UK GDP has yet to reach the level seen at the beginning of 2008 mean that most people still see the UK as being “in recession” despite growth of around 1% a year since the beginning of 2010.*

interest rates and showing forbearance to struggling firms risk not only delaying (and exacerbating) the pain but also creating whole new classes of malinvestments. On a micro level, resources remain stuck in firms that can never hope to turn a profit, thus encouraging both workers and investors to remain committed to firms that offer little hope for future growth (for higher wages or better – perhaps any – profits).

The above has sought to provide the economic context to the current debate about zombie companies: to explain why they come about and why attempts to sustain zombie firms may be unwise. Readers may at this point feel that what we are offering is a counsel of despair: that we are suggesting that actions by both governments and banks cannot help and may even be counter-productive. However, as we shall show in chapter 7, the solution to the zombie phenomenon rests not only in liquidation – vital though that is in a healthy market economy – but also on the role of entrepreneurs in identifying firms that can be turned around and made profitable again.

Before doing so, we continue our discussion of the economic framework. In chapters 4 and 5 we shall explore in more detail why attempts “to engineer a soft landing” and avoid the pain are misguided and deeply harmful to the recovery and to the country’s economic future, beginning with the work of one of the most important economists of the 20th century: Joseph Schumpeter.

## 4. Joseph Schumpeter versus the zombies

Academics have identified two routes through which zombie companies can impact upon the economy, in particular by affecting aggregate productivity.<sup>26</sup> Firstly, zombie firms tend themselves to have low and potentially shrinking productivity. For whatever reason, their use or balance of labour and capital or the firm's level of multifactor productivity makes it uncompetitive. Secondly, by continuing to operate in an environment where they should have been winnowed out, they squeeze out more productive rivals, thus preventing new technologies or ways of working from boosting multifactor productivity across the economy.

This latter represents a barrier to the natural economic process that Joseph Schumpeter referred to as Creative Destruction, where new ideas and new ways of working eliminate former practices and products:

*The fundamental impulse that keeps the capital engine in motion comes from the new consumers' goods, the new methods of production and transportation, the new markets... [The market] incessantly revolutionizes from within, incessantly destroying the old one, incessantly creating a new one.*

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26. A.G. Ahearne and N. Shinada, "Zombie firms and economic stagnation in Japan", *International Economics and Economic Policy* 2(4), 2005, 363-381.



*This process of Creative Destruction is the essential fact of capitalism.*<sup>27</sup>

Evidence that creative destruction is a real and valuable process is provided by empirical studies. In a review of academic papers from the 1990s, Foster, Haltiwanger and Krizan found evidence of “large scale, ongoing reallocation of outputs and inputs across individual producers” and a consensus that a “rapid pace of output and input reallocation along with differences in productivity levels and growth rates are the necessary ingredients for the pace of reallocation to play an important role in aggregate (i.e., industry) productivity growth.”<sup>28</sup> Based upon the empirical evidence, Foster, Haltiwanger and Krizan observe that

*there are large and persistent productivity differentials across establishments in the same industry... [E]ntering plants [ie. new entrants to the market] tend to have higher productivity than exiting plants. Large productivity differentials and substantial reallocation are the necessary ingredients for an important role for reallocation in aggregate productivity growth...*

*[A] robust finding is that the impact of net entry is disproportionate since entering plants tend to displace less productive exiting plants, even after controlling for overall average growth in productivity. The gap between the productivity of entering and exiting plants also increases in the horizon over which the changes are measured since a longer horizon yields greater differentials from selection and learning effects.*

Creative destruction can only operate effectively in a free market, however. Markets force poorly performing businesses to restructure because their relative input costs are higher than the relative input costs of more efficient firms. Taking a basic Cobb-Douglas function for the average

$$Y = A L^{\alpha} K^{\beta}$$

where Y = total production, L = labour input, K = capital input, A = multi-factor productivity, and  $\alpha$  and  $\beta$  are the output elasticities of capital and labour, if the cost of L or K is higher for firm X than it is for its competitors, firm X will trade at a disadvantage. The firm will be unable to sustain a higher price for its product over

27. Joseph Schumpeter, *Capitalism, Socialism and Democracy*, 1942.

28. Lucia Foster, John Haltiwanger and C.J. Krizan, *Aggregate Productivity Growth: Lessons from Microeconomic Evidence*, 2000.

time because market share will shift to competitors, so it will have to trade at a narrower margin or even at a loss until it can reduce the input costs of L and K. As both labour and capital have diminishing marginal productivity, firms restructure by shedding those labour and capital inputs (jobs and plant) that are least efficient (where the output per unit of input is smallest). This means the firm “down-sizes” until it becomes profitable again (until the marginal productivity of inputs is greater than the margin cost of those same inputs). If firm X cannot reduce the input costs of L and K to the point at which it becomes profitable, it will have to cease operations entirely.

Ahearne and Shinada provide an example of how this ought to work in the real world when they suggest that

*profit-maximizing banks and other financial intermediaries would normally be expected to withdraw credit from poorly performing firms, putting pressure on such firms to improve efficiency or close down. Credit [and, we might add, labour] would then be reallocated to more innovative firms or to potentially productive start-up companies, allowing these firms to expand.<sup>29</sup>*

This is not what is happening, however. As is clear from the evidence we provided in chapter 2, banks are doing precisely the opposite. Rather than withdrawing credit from poorly performing firms, financial institutions are continuing to roll over bad debts, to lend to distressed companies at favourable terms rather than force them into liquidation.

As discussed in chapter 3, this is largely the result of government interventions in the banking sector that is forcing banks to avoid realising losses. This is a particular example of a more general phenomenon which is itself of profound importance to our understanding of the cause of, and answer to, not just the zombie phenomenon, but the general poor recovery following the Global Financial Crisis.

Efforts by policymakers to avoid ‘unnecessary’ bankruptcies; to ‘protect jobs’ and to ‘engineer a soft landing’ not only avoid the destruction, but also impede the creative side of this process. To provide an analogy for how such interventions might impact upon the functioning of creative destruction, imagine the amount of effort and taxpayers’ money that could have gone into protecting jobs in typing pools threatened by the impact of the printer and the photocopier. It should be immedi-

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29. *Ahearne and Shinada, op cit.*

ately apparent that intervening to prevent or slow the process of creative destruction can only result in a huge amount of value being poured into the pursuit of slowing productivity growth.

The response to the Great Recession has been similarly misguided. Interventions have been based upon the assumption that the crash of 2007-8 was an external shock to the economy that did not reflect any problem with the underlying fundamentals; that there was nothing wrong with the economy in the mid-2000s and the sooner we got back to the status quo ante the better. The government has sought to prevent large swathes of liquidations and redundancies during what is seen as a cyclical downturn. The government has therefore cut interest rates, urged banks to continue (or expand) lending, and expanded government spending to buoy up “aggregate demand.”

If the Great Recession is in fact a cyclical downturn then an orthodox Keynesian response might be justified. But if, as seems likely, the Global Financial Crisis was a symptom of deeper, more fundamental problems with the economies of the West, then trying to maintain aggregate demand at the expense of expanding government debt is merely postponing the readjustments that are necessary for recovery. Considering the vast monetary and fiscal stimuli applied across most if not all western economies, and the fact that recovery continues to prove elusive, this suggestion seems plausible. Perhaps it is time to allow the winds of creative destruction to blow.

## 5. Zombies around the world: two case studies

### Lessons from the zombie economy in Japan

Those who have studied the Global Financial Crisis and the ensuing Great Recession would be forgiven for believing that “zombie companies” were an invention of consultants and journalists. They have received little attention in serious studies. But in the context of Japan’s Lost Decade, zombie companies and zombie Banks play a central role in the academic literature.

The first reference to the zombie phenomenon in the Japanese economy appears to have been in an article by Takeo Hoshi published in 2000.<sup>30</sup> In a paper published in 2004 Ahearne and Shinada summarise the general view on the zombie phenomenon in Japan:

*It is often claimed that one factor contributing to Japan’s economic weakness over the past decade is that Japanese banks have continued to provide financial support for highly inefficient, debt-ridden companies, commonly*

30. Takeo Hoshi, 2000, “Why is the Japanese economy Unable to Get Out of a Liquidity Trap?” in Mitsuhiro Fukao and Hiroshi Yoshikawa (eds.), *Zero Interest Rates and the Japanese Economy*, Tokyo Nihon Keizai Shimbunsha, pp. 233-266, (in Japanese).

*referred to as “zombie” firms. Measured productivity growth of these firms has tended to be very low or even negative for many years, putting a significant drag on the productivity performance of the Japanese economy. Moreover, zombie firms prevent more productive companies from gaining market share, strangling a potentially important source of productivity gains for the overall economy.*<sup>31</sup>

In a 2006 paper later published in the American Economic Review, Caballero, Hoshi, and Kashyap found that the “wide-spread practice of Japanese banks of continuing to lend to otherwise insolvent firms” has had “distorting effects on healthy firms that were competing with the impaired firms.”<sup>32</sup>

As we saw in chapter 3, both tough capital adequacy ratios and the rhetoric of politicians and journalists makes banks reluctant to foreclose on debtors who cannot meet their obligations, while simultaneously discouraging them from lending to new, potentially profitable businesses. In the case of Japan, the government’s support for banks that lent to zombie companies, and the banks’ own unwillingness to foreclose, kept businesses afloat that would otherwise have gone bankrupt. However, keeping unprofitable companies afloat created distortions in the Japanese economy.

The effect of this failure to allocate capital efficiently is observable in the ‘real’ economy. Ahearne and Shinada observe notably slow productivity growth in the non-traded-goods sectors of Japan’s economy (as these are the sectors insulated from international competition) and suggest that there is considerable scope for catch-up growth in these sectors which could have positive effects in the wider Japanese economy. However, they also note that this potential “can be tapped only if the most inefficient firms in these industries close down or undergo substantial restructuring and the remaining firms work to improve performance.” The results of their study of firm-level data lead them to conclude that in some of these non-traded sectors,

*...the reallocation of market share is going in the wrong direction, adding to already poor productivity performance. Moreover, it appears that highly*

31. Alan G. Ahearne and Naoki Shinada, *Zombie Firms and Economic Stagnation in Japan*, October 2004.

32. Ricardo J. Caballero, Takeo Hoshi, and Anil K Kashyap, “Zombie Lending and Depressed Restructuring in Japan”, *op cit*.

*inefficient firms are being sustained in large part by financial support from Japanese banks. In turn, these poor banking practices are likely contributing to problems in the Japanese banking sector...*

*Thus, it seems clear that corporate restructuring needs to happen and is not coming about through competitive pressure. One policy implication is that banks should be provided incentives to withdraw this support and force these firms to meaningfully restructure or in some cases close.*

Instead, the regulatory incentive is exactly the reverse.

Caballero, Hoshi and Kashyap cite other distortions to the Japanese economy resulting from the pressure on banks to show “forbearance.” One area distorted by zombies is employment. The policy and practice of extending loans to zombie companies avoids unemployment by keeping workers employed in areas where their productivity had fallen. While this might at first seem to be a welcome feature (nobody likes unemployment, after all), this does not necessarily lead to overall elevated levels of employment. Rather, while zombie firms retain workers, new firms fail to take workers on. In other words, fewer jobs are lost but at the same time fewer are created, and therefore workers are retained in jobs where their productivity has fallen rather than shifting into new jobs where productivity would have been higher. This reflects the fact that forbearance and the creation of a zombie economy undermines the process of Schumpeterian creative destruction discussed in chapter 4.

Caballero, Hoshi and Kashyap therefore find the zombie phenomenon to be associated with falling levels of aggregate restructuring, with job creation being especially depressed in the sectors with the most zombie firms, and with lowered productivity at the industry level: “the presence of zombies slows down job destruction... second... the presence of zombies depresses job creation. Creation declined more in the sectors that experienced sharper zombie growth.”

This has clear echoes with the “productivity puzzle” in the UK. As noted in chapter 2, the UK has seen a deep and sustained fall in productivity since 2008, combined with an unusually low fall in employment. As the Institute for Fiscal Studies explains:

*Since 2008 employment levels in the UK have been remarkably robust, and*

*the unemployment rate, while too high, has remained mercifully low given the sharp falls in national income. The contrast with the recessions of the early 1980s and 1990s is dramatic.*

*The other side of this coin, though, is that productivity has slumped. More of us are working but, on average, we are producing 2.6% less output for every hour worked than we were at the start of 2008. More starkly we are producing 12.8% less than we would have been had the pre-recession growth in labour productivity continued.<sup>33</sup>*

This comparison offers an opportunity for further research, taking the methodology established by Caballero, Hoshi and Kashyap and applying it to UK firms.

Unsurprisingly, Caballero, Hoshi and Kashyap describe the process of propping up zombie companies as “a very inefficient program to sustain employment.” It would be altogether better if the government allowed the firms to go bankrupt and used the money saved to compensate workers – both by supporting them during unemployment and (crucially) to help them retrain so that they could be redeployed to industries where there was real demand. “The forgone benefits that would have accrued had Japan returned at that point to having a normally functioning economy could have been large enough to justify a very generous transition policy package to the displaced workers that would have been released if the zombies were shuttered.” Instead, “the normal competitive outcome whereby the zombies would shed workers and lose market share was thwarted”.<sup>34</sup>

A further distortion is that the presence of the zombie companies congests markets and depresses prices in the industries in which they trade. A similar phenomenon can be seen in the on-going trials of the airline industry in the USA (see below). By both depressing prices and buoying up wages, zombie firms not only prevent the rationalisation that would have led some to bankruptcy and others to profitability; they also discourage new entries into the market and thus prevent innovation.

Caballero and Mohamad L. Hammour, in a paper from 2000, describe this pro-

33. *Piecing together the productivity puzzle*, IFS press release, [http://www.ifs.org.uk/pr/productivity\\_puzzle.pdf](http://www.ifs.org.uk/pr/productivity_puzzle.pdf). The research to which this text refers was published as part of the IFS Green Budget 2013.

34. Caballero, Hoshi and Kashyap, *op. cit.*

cess as one where the market became characterised by “sclerosis”, the preservation of production units that would not be saved without the banks’ subsidies, and by “scrambling”, the survival of firms and projects that are less productive than those that might otherwise have entered the market had it not been congested with zombies.<sup>35</sup>

There are other distortions that also have a depressing effect on the economy. Caballero, Hoshi and Kashyap find that

*Investment and employment growth for healthy firms falls as the percentage of zombies in their industry rises, and the gap in productivity between zombie and non-zombie firms rises as the percentage of zombies rises. These findings are consistent with the predictions that zombies crowd the market and that the congestion has real effects on the healthy firms in the economy...*<sup>36</sup>

In summary, the presence of zombies in a sector depresses investment, job creation, restructuring and overall productivity, and the fault can be laid squarely at the feet of regulators: “Japanese regulators... failed to recognize the large costs of allowing zombies to continue operating during the episode.”<sup>37</sup>

We have noted above the parallels between Japan’s lost decade and The Great Recession in the West. There is reason to believe that this is not a coincidence. Caballero, Hoshi and Kashyap observe that this experience has parallels in the transition of many former socialist economies in the 1990s and possibly in China more recently.

### **Flying zombies: the American airline industry**

The airline industry in America provides another example of an industry that has witnessed the zombie phenomenon. Ever since deregulation in the late 1970s the market for air travel has been characterised by a number of big, inefficient firms that struggle to make a profit.

35. Ricardo J. Caballero and Mohamad L. Hammour, “Creative Destruction and Development: Institutions, Crises, and Restructuring,” *Annual World Bank Conference on Development Economics 2000*, pp. 213-241.

36. Caballero, Hoshi and Kashyap, *op. cit.*

37. Caballero, Hoshi and Kashyap, *op. cit.*



According to analysis by David Wessell of The Wall Street Journal, “major airlines’ costs exceed revenues, and they can neither cut costs nor raise fares enough to turn a profit”.<sup>38</sup> In most industries, this would lead to a winnowing of the least efficient businesses, reducing capacity until survivors can raise prices enough to turn a profit. But the airline industry has proved resistant to this. The reason is partly because “Airlines that go into bankruptcy don’t go away. They shed costly contracts and continue to fly, making it impossible for competitors to raise prices. One key to survival [is that] Wall Street, banks, credit-card companies and aircraft makers keep lending them money, figuring they’re worth more alive than dead.”

In this context, the agent that keeps the zombies functioning is America’s Chapter 11 bankruptcy procedure, which allows businesses to restructure while continuing to trade. This differs from what most people think of as bankruptcy, where a company is wound up and its assets sold off to cover its debts. In the United States, companies entering Chapter 11 bankruptcy live to fight (or fly) another day. For the American airlines industry, this meant that despite no fewer than 100 airline bankruptcies in the first 25 years following deregulation, most firms continued to trade. In one case, US Airways was able to file for Chapter 11 bankruptcy in 2004 despite having been through the Chapter 11 bankruptcy process just a year before.

This is harmful to workers and retirees in that it enables companies to renege upon employment and pension promises. It also hurts American taxpayers when pension liabilities are dumped upon them. Crucially however it has prevented a rationalisation of the industry that could have restored it to profitability. Rather than competition eliminating inefficient firms, thus reducing capacity and so enabling prices to rise until the remaining firms are profitable once again, airlines have been able to use Chapter 11 bankruptcy to continue to operate at prices that are in fact loss-making. As a result, reports Wessell, “the US airline industry lost \$32.3 billion between 2001 and 2004, wiping out the more than \$18.2 billion it earned between 1932 and 2000.”

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38. David Wessell, “Red Eyes: For U.S. Airlines, a Shakeout Runs Into Heavy Turbulence”, *Wall Street Journal*, 19 September 2005.

## 6. Resurrecting the zombies

In Chapter 1 we identified five features that define a zombie company. In this chapter we will return to two of those features:

4. The above prevents the company from restructuring and so becoming more profitable
5. The above vitiates the need for the company to go into receivership, thus preventing the redeployment of capital and labour to more productive sectors.

The assumption in our paper thus far has been that zombie companies cannot be restructured and cannot go into administration, and so the capital and labour tied up in them cannot be redeployed. In this chapter we will challenge that assumption by proposing that it is perfectly possible to restructure unprofitable companies so that what emerges is a profitable (“live”) entity, freeing surplus capital and labour to be redeployed to other, more productive uses.

In doing so we turn to the literature of corporate turnaround. Before we exam-

ine how turnaround works, however, we need to acknowledge that concepts of business turnaround have not traditionally been applied to zombie companies, but to companies in crisis. Thus, for example, Mathew J Manimala describes a turnaround situation as “one where a company suffers declining economic performance for an extended period of time, such that the performance level is so low that the survival of the company is threatened unless serious efforts are made to improve its performance.”<sup>39</sup>

Corrado Gatti cites three earlier studies (Guatri, 1995; Barker III and Duhaime, 1997; Rispoli, 1998) when he distinguishes between a turnaround situation, which involves “corporate changes which take place when a firm undergoes a survival-threatening performance decline,” and restructuring, which “can take place also if a firm is not facing a deep crisis, but a slight decline or is simply looking for new business opportunities.”<sup>40</sup>

Having said that, our application of the study of business turnaround is not unique. The Institute for Turnaround, for example, has been a leading voice discussing the zombie phenomenon in the UK since the onset of the Great Recession.

As we outlined in chapter 1, what distinguishes zombie firms is not that “the survival of the company is threatened” but that they are perpetually teetering on the edge of disaster without ever falling off. Nonetheless, it is our view that a simple “restructuring” may not be enough to restore profitability to zombie companies. Though some zombies are the victims of a cyclical downturn, others find themselves in this state because of deep-rooted structural problems which would, in normal times, lead to crises. It is only due to low interest rates and creditor forbearance that the crisis does not manifest itself. To achieve profitability, therefore, what is needed is to attack the firm’s problems as though the benefits of easy credit were not available.

39. Mathew J Manimala, *Successful Turnarounds: The Role of Appropriate Entrepreneurial Strategies*, Working Paper no: 337, Indian Institute of Management Bangalore, 2011.

40. Corrado Gatti, “Leadership and Cultural Renewal in Corporate Turnarounds”, © SYMPHONYA Emerging Issue in Management, n. 2, 2002.

## Identifying zombies suitable for turnaround

Before we discuss how turnaround might be achieved, it is important to recognise that not all firms that meet the zombie criteria are in need of, or would benefit from, turnaround. In chapter 1 we distinguished four types of zombie firm:

- Firms which are in terminal decline and for which the current easy credit environment merely delays the inevitable;
- Early stage companies for which the current easy credit environment is a useful opportunity to grow;
- Companies suffering from the cyclical downturn but for which the fundamentals are sound;
- Firms struggling due to management practices or a corporate structure despite producing marketable goods or services.

It is this last category that offers an opportunity for turnaround. Firms in terminal decline will eventually be winnowed out of the market. It would take a truly heroic turnaround to save a company whose core products were no longer in demand, for example. For the sake of the wider economy (and, in the long run, their investors and employees) it is best if creative destruction can take effect and the labour and capital that is tied up within them is reallocated to profitable uses as soon as possible.

Early stage companies will in all likelihood have patient early investors: either owner-managers for whom the firm is a lifestyle commitment or business angels and venture capitalists who do not expect short term returns. Cyclical zombies will most likely find that tightening credit conditions are accompanied by improving demand for their products (recovery cuts both ways).

It is the firms being failed by their management and corporate structure that need to be turned around. While creative destruction could usefully reallocate the firms human and capital resources, it may not be efficient to reallocate all of them when some could be retained in a more efficient or better-structured form of the firm. It is important not to be too enthusiastic about creative destruction or to take too judgemental or puritanical an approach to an unprofitable firm: creative destruction is a description, not a prescription; it should be accepted and not feared, but

it should not be seen as retribution for poor management practices. Capitalism does not need to be “red in tooth and claw” to be effective.

### **Who can identify a turnaround zombie?**

The above discussion raises two important questions: how, and by whom, is the judgement to be made as to which zombies are worth saving, which should be allowed to die, and which can be allowed to continue as they are in the expectation that the future will be kind.

While it is tempting to lay out below a series of criteria for identifying which zombies are ripe for turnaround, it is our view that this is neither a science nor an academic exercise. Rather, this is the appropriate role for entrepreneurs: for investors and turnaround professionals. The entrepreneurial function consists of using specific, and often tacit, knowledge to identify opportunities in the market. Mark Pennington of Kings College (London) writes of the “entrepreneurial imagination” whereby “Faced with the same set of data some actors perceive opportunities whereas others see nothing.”<sup>41</sup>

Jesus Huerta de Soto at King Juan Carlos University identifies six characteristics of the knowledge that entrepreneurs use to make judgements about potential actions (such as taking over and seeking to turn around an apparently failing or moribund company):<sup>42</sup>

1. It is subjective and practical, rather than scientific
2. It is exclusive
3. It is dispersed
4. It is mainly tacit
5. It is created from the exercise of entrepreneurship
6. It can be transmitted via complex social processes.

41. *Mark Pennington, Robust Political Economy: Classical Liberalism and the Future of Public Policy, Edward Elgar Publishing Ltd, 2011.*

42. *Jesus Huerta de Soto, Socialism, Economic Calculation and Entrepreneurship, Edward Elgar Publishing Ltd, 2010.*

Two lessons can be drawn from the above. Firstly, it is not possible to set out exactly what conditions will define a company that is ripe for turnaround. Rather, this needs to be a judgement call by an entrepreneur acting both on their assessment of the situation and their (tacit) knowledge of how such a firm might be turned around.

Secondly, it is not a role that can be undertaken by government. As Pennington explains, it is impossible

*to 'gather' and centralise information of this nature, no matter what incentives are given to encourage 'search'... [K]nowledge of this order resides within individual minds and is embedded in the cultural routines and procedures of different organisations and their working practices... [E]ntrepreneurial action in markets combines information gleaned from deliberate search and the private context-dependent knowledge derived from experience and the exercise of creative imagination.<sup>43</sup>*

Governments cannot identify which firms are worth turning around or how they might be saved because they cannot gather and hold all the (dispersed and exclusive) knowledge that would be needed to make such a judgement. Furthermore, while entrepreneurs are able to take a risk in seeking to turn around a failing or zombie company, for governments to do so would create a fundamental principal/agent problem, in that the politicians and bureaucrats who decided to take on and seek to turnaround the company would not be taking on any risk themselves, but would instead be risking public money, despite the public potentially seeing the issue very differently.

It is therefore both proper and essential that the decision as to whether a zombie company is turned around or left to manage as it is should be left to private investors. For governments to seek to undertake this role would be to resurrect the failed policies of the past, where large amounts of public money were poured into failing firms by governments that believed they could out-perform the market and pick winners.

### **The role of management in the turnaround decision**

While the above makes clear that it is for business leaders to make decisions

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43. Mark Pennington, *Robust Political Economy*, p36.

about the future of firms, it is not necessarily the case that such decisions are best taken by managers within zombie companies. To once again reiterate a basic feature of the zombie phenomenon, low interest rates and forbearance can indefinitely stave off any crisis. This means that turnaround is not a requirement for a zombie firm in the way it is for a company in crisis. Instead, it becomes a choice for management and shareholders.

This is highly significant because the actions necessary to turnaround a business are not only a choice but also a gamble. For shareholders and creditors an unsuccessful turnaround may crystallise losses that might otherwise have been avoided or at least postponed; for suppliers and customers a business relationship that remains, from their perspective, functional (goods are still being bought or supplied, meaning that the supplier or customer is perfectly happy with the state of the zombie firm) might instead disintegrate.

For management, as we shall see below, the question is even more important; indeed, existential. Turnaround is almost always terminal for existing senior management within a firm. This creates a principal/agent problem within the firm, as the incentives for managers are not aligned with (indeed, run entirely counter to) those of other stakeholders. Existing management is probably more secure if the firm remains a zombie than they are if the firm undergoes turnaround. Thus in all likelihood the decision to turn around a firm can only be taken at board level (though even that may be tricky as many corporate turnarounds require the removal of weak or obstructive board members as well).

## **The practice of business turnaround**

In the remainder of this chapter we will examine the characteristics of a corporate turnaround. In doing so we should remember that, as with the decision to turn the firm around in the first place, how the firm is to be turned around is an entrepreneurial action (or set of actions) that will be unique to the actor and to the firm. No two turnarounds are the same; nor can a standard template be designed. As such, the following should be seen as a set of common themes, rather than a road map for turnaround.

Turnaround is an act of deep surgery: “we have seldom encountered a turnaround plan that was too drastic” argue Slatter, Lovett and Barlow in an influential work

on *Leading Corporate Turnaround*.<sup>44</sup> The reason for this is that companies in need of turnaround are usually in a very bad way. In one passage, they provide a very depressing list of the problems that afflict troubled companies:

*Typical symptoms include a confused organisation structure, a paralysed middle management, resistance to change and demoralised staff. Staff turnover is probably high, the most able people having left and the remaining workforce lack key skills and capabilities. Dysfunctional behaviour, where employees fail to co-operate towards achieving the corporate objectives, may be encouraged by silo thinking, a rewards system not aligned with the strategy, and a culture of non-performance. Significant organisation change is therefore required.*

They suggest that “Turnaround management involves radical rather than incremental change. Very sick companies have serious problems that can only be tackled through fundamental, holistic recovery plans.” They identify seven essential ingredients to a turnaround plan:

1. **Crisis stabilisation:** The first stage is to stabilise the company and to restore the confidence of key stakeholders. Short-term cash generation becomes a priority and management seeks to rebuild predictability, communicating with stakeholders so that they know what the company will generate and when, so that they know whether and when they are going to be paid.
2. **New leadership:** As the most frequently cited cause of corporate decline is poor senior management, most turnarounds will see a substantial amount of cleaning house. This will in all likelihood involve a change of Chief Executive Officer (CEO) – the old one being “the principal architect of failure” – but may also include a new Chief Financial Officer. More tricky is the replacement of inadequate board members, as it is frequently the board whose agreement is needed to remove the CEO (and themselves). We would add that a new Human Resources Director may also be useful, especially one that is familiar with turnaround or restructuring programmes that may involve substantial staff changes.
3. **Stakeholder management:** The new CEO will need to quickly allay the

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44. Stuart Slatter, David Lovett and Laura Barlow, *Leading Corporate Turnaround: how leaders fix troubled companies*, Jossey-Bass, December 2005.



concerns that stakeholders (be they shareholders, suppliers, creditors, staff, customers or whomever) have about their own risk profile. Confidence that the company can deliver (dividends, demand, repayments, wages, goods) needs to be restored so that the stakeholders can be confident that the relationship has a future, and do not pull the plug. Regular, honest communication about the financial status of the company and its short term prospects is key.

4. **Strategic Focus:** The turnaround plan needs a strategy, which may include any of

- a. Redefining the business
- b. Divestment
- c. Growth via acquisition
- d. Product market refocusing
- e. Outsourcing processes.

5. **Critical process improvements:** Similarly, there needs to be an approach to deal with likely problems with processes. This is where business process re-engineering (BPR) comes in, though BPR is only one aspect of the turnaround and it is important that the strategic focus not be lost.

6. **Organisational change:** Put bluntly, “People problems are usually among the most visible signs of a troubled company”. The strategy requires some if not all of the following:

- a. New organisational structure, a powerful way of radically changing a firm;
- b. Accountability and performance management, as a lack of accountability among managers is a common theme in failing firms;
- c. New terms and conditions of employment to incentivise implementation of the plan

d. Focused training

e. Improved communications throughout the organisation.

**7. Financial restructuring:** It is interesting to note that this is the last stage in Slatter, Lovett and Barlow's list. As they explain, "The objectives of any financial restructure are to restore the business to solvency on both cash flow and balance sheet bases, to align the capital structure with the level of projected operating cash flow, and to ensure that sufficient funds in the form of existing and new money are available to finance the implementation of the turnaround plan."

We should note that Slatter, Lovett and Barlow's outline differs from our own discussion of zombie firms in this report. Slatter, Lovett and Barlow discuss the turnaround of actually-failing, rather than perpetually staggering, firms. They view substantially under-performing companies as typically suffering "from a rapidly worsening cash position and a lack of management control", whereas the characteristics we list in chapter 1 suggest a firm where the cash position is stable but provides no hope for the future. They also identify a different list of criteria for companies in need of turnaround, that include cash flow problems, excessive gearing, inappropriate debt structure and balance sheet insolvency. Clearly this does not meet the definition of a zombie firm.

Nonetheless, their prescription does seem to offer a route out of the zombie condition. Of particular interest is their distinction between the Analysis Phase, the Emergency Phase, and the Strategic Change Phase. The first of these is when diagnosis and prescription are worked out. The second is when the shock-actions are taken to save the firm. The third is when the operational factors are undertaken. The second is particularly significant because, though it represents the surgery rather than the recovery, it is frequently dramatic and it is therefore this aspect of turnaround that gets all the attention.

*[D]ivesting subsidiaries, closing plants, making employees redundant, firing incompetent managers, reducing surplus inventories, selling obsolete inventories, eliminating unprofitable product lines, etc. – all of which are designed primarily to improve the cash outflow and stop the losses...*

are frequently portrayed in the media as either acts of callousness or losses of

great institutions (think of when high street branches of well-known shops close, or products which are highly nostalgic but not actually selling are withdrawn).

Too often the focus is on the jobs lost and not the jobs saved; on the fact that things are not as they were and not on the fact that what has survived is a stronger, leaner, more efficient firm, one that is making a profit and meeting real customer need. It is our hope that this report will serve in some degree to better inform policymakers and commentators as to the important and valuable contribution that both insolvencies and turnarounds make to a functioning economy, and in so doing to shift the debate from one that mourns the loss of every company name and counts only the redundancies, to one that celebrates the opportunities for new companies to be formed and for existing firms to return to profitability. That is the role that insolvencies and turnaround play in a thriving market economy.

### **Positive policy responses to zombie firms**

The appropriate response to recession, therefore, is not a public policy, economy-wide approach but one that is diffused, dispersed and embedded among entrepreneurs. It is for individual investors, owners and business leaders to decide which firms are worth trying to save and which should be quickly and efficiently liquidated. This role is essentially entrepreneurial for two reasons. Firstly, the knowledge as to which firms can be saved, and which cannot, is itself dispersed and is frequently “tacit” (i.e. it is knowledge that individuals hold but of which they are not necessarily consciously aware).<sup>45</sup> As Thomas Sowell puts it, “The knowledge needed is knowledge of subjective patterns of trade-off that are nowhere articulated, not even to the individual himself.”<sup>46</sup>

Secondly, entrepreneurs only risk their own assets, or those of willing partners. The risk that a private equity company takes when buying a struggling firm is private risk. Conversely, the risk that a government takes when it bails out a struggling firm is public risk. In terms familiar in the wake of the 2008 banking crisis, political solutions “privatise profits but socialise risks.” It is therefore both more prudent and more moral for politicians to let individuals undertake the risky process of sifting the commercial wheat from the chaff.

45. *For a discussion of tacit knowledge, see Michael Polanyi's The Logic of Liberty, University of Chicago, Chicago, 1951.*

46. *Thomas Sowell, Knowledge And Decisions, New York 1980.*

# Conclusions

Two traits characterise the zombies that appear in popular fiction: they are not real, and they are faintly laughable. Indeed, it is hard to get away from the feeling that, in the event of the zombie apocalypse, one merely needs to walk away from them and the problem is solved.<sup>47</sup> In this respect, the zombie label may be unhelpful. As we have demonstrated, economic zombies are quite real, and the damage they do to the health of the economy is such that governments and entrepreneurs cannot simply walk away.

In the UK at present there are potentially hundreds of thousands of zombie firms: companies that are only able to meet the interest on their loans but have little hope of ever repaying the capital, and which are only able to continue thanks to the policy of low interest rates being pursued by the Bank of England and by the forbearance of financial institutions. Taken on their own terms, these policies are working well: insolvencies in the UK, even during the most substantial recession in perhaps a century, have been low – unusually low. The result of this is visible in the real economy. Unemployment has been kept low by the standards of recent recessions, but productivity has suffered: real output per hour worked was 2.6% lower in the third quarter of 2012 than it was four and a half years earlier, and 12.8% below its pre-recession trend.

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47. *The new fashion for fast-moving zombies, as depicted in films such as 28 Days Later and World War Z, are obvious exceptions.*

The rise of these zombie firms is largely the result of deliberate government policy. As Spencer Dale, Chief Economist at the Bank of England explained, “The whole point of monetary loosening at the moment [is] to keep companies who [sic.] have a viable long-term future in business while demand is temporarily weak”.<sup>48</sup> We do not dispute this, but it is our contention that the Bank of England’s low interest rate policy, quantitative easing and pressure on financial institutions to roll over loans and keep lending, do more than just “keep companies who have a viable long-term future in business”. These policies are utterly indiscriminate (we might prefer to say “undiscriminating”), extending easy money both to firms with “a viable long-term future” and those whose business models are hopelessly inadequate. Mr Dale himself acknowledges that “trying to disentangle those two effects is very difficult to do.” We further argue that government rules on capital adequacy also contribute to the creation and perpetuation of a vast number of zombie companies.

The effects of the zombie phenomenon are real and damaging. Zombie firms have low and often shrinking productivity, and their continuing operation prevents other, more productive firms entering the market, retarding the process of creative destruction and preventing new technologies and new business practices from boosting multifactor productivity across the economy. Attempts by governments to engineer “a soft landing” or avoid “the worst excesses of the recession” simply impede the reallocation of resources (labour and capital) from less-productive to more-productive endeavours. The recession is not allowed to play out and so the recession ends up being shallower but more prolonged – it is worth noting in this respect that the UK’s recovery has been the slowest of any recession recorded in the last hundred years.

Academic studies of Japan’s two “lost decades” provide a more detailed and more depressing list of the effects of zombie firms. Levels of aggregate restructuring are inevitably lower. Productivity growth in the non-traded-goods sectors of Japan’s economy were notably slower due to the dominance of zombie firms. Unemployment is depressed but so is new job creation, meaning that overall workers are retained in jobs where their productivity has fallen rather than shifting into new jobs where productivity would have been higher. It is, in the words of Caballero,

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48. *The quote is an amalgam of two statements, taken from Central banks face zombie nightmare, Financial Times, 8 January 2013, and Zombie companies stalk UK economy, Financial Times, 18 November 2012.*

Hoshi and Kashyap, “a very inefficient program to sustain employment.”<sup>49</sup> Indeed, the extra growth in the Japanese economy would have more than paid for generous compensation and retraining packages for redundant workers. Zombies also lead to lower investment in healthy firms as banks roll over bad debts and fail to make new, good ones. Similar effects can be seen in the US airline industry and various other regions and sectors.

It needn't be like this. Government needs to urgently revise its approach to recessions – including the current ongoing economic stagnation – if it is to move the UK economy back to strong growth and ensure that future recessions (if they cannot be avoided) are brief and the recoveries swift. Central banks must be discouraged from slashing interest rates in the belief that what matters is macro-level aggregates rather than micro-level outcomes; buoying up GDP by sustaining the operation of fundamentally unprofitable businesses is a deeply flawed and short-sighted policy.

Governments must also take a more nuanced view of capital adequacy rules. It is entirely understandable that regulators wish to ensure that banks can remain solvent when hit by the shock of substantial asset mark-downs. However, mechanically applying such rules with no discretion risks doing more harm than good. Financial institutions need to be given regulatory incentives (or at least leeway) to liquidate bad debts without falling foul of capital adequacy rules; it is better for the economy if banks crystallise losses and force failing firms into receivership than that they prop them up just to ensure that the numbers balance at the level approved of by a convention of international regulators.

What governments most definitely must not do is to try to distinguish which firms have a future and which to not, and actively intervene to save those that do. This has been tried before, and inevitably results in disaster. Firstly, governments do not have and cannot gather the requisite information to make these judgements. Secondly, such choices inevitably become politicised and end up being made for political rather than economic reasons, with well-organised insiders able to extract concessions at the expense of badly-organised taxpayers. Thirdly, governments can only intervene by risking taxpayer money, which creates substantial principal:agent problems and is, we argue, immoral.

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49. Ricardo J. Caballero, Takeo Hoshi, and Anil K Kashyap, “Zombie Lending and Depressed Restructuring in Japan”, *op cit*.

What hope then for the struggling firm? We argue that there is an appropriate route for struggling firms that can be saved to find salvation, through the entrepreneurial actions of private investors operating in a free market. Able to access unique, subjective and often tacit knowledge, unburdened by political considerations and risking only the money of willing investors, these private entrepreneurs can act upon those zombie firms they believe can be saved and seek to turn them around. While this is not new, it does require a change of attitude among politicians, journalists and the wider public. Instead of decrying every closure and focusing on every job lost, we need to focus on the plants and outlets kept open and celebrate every job saved.

The right balance of liquidations and turnarounds can ensure that capital and labour is reallocated or refocused in such a way that it becomes productive and rewarding to investors, workers and the rest of society. This will lead to higher productivity, rising employment, and stronger growth in profits, wages and the wider economy.

Such is the best way to tackle the zombie hoard.