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Divergence between profit margins and interest rates implies an historic investment opportunity

Quantitative easing - why is it necessary and can it succeed?

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Bulletin Number 137 (“A view going beyond those of Piketty and Mizuno – How do we resolver1>g>r2?” published April 7, 2015) pointed out that whilst profit margins were rising as never before, interest rates were declining sharply and that the divergence between the two appears to be only continuing to widen. We also stressed the possibility that this represents a historic investment opportunity. In this report, we set out to analyze why the divergence between profit margins and interest rates has widened to such a remarkable extent given that they should be providing similar returns on capital to those delivered to date, why this divergence has continued to increase over the past 10 years or so, and why this can be thought of as being an investment opportunity.

(1) Discontinuity shift that occurred in the US around the year 2000, economic aspects

Corporate earnings, labor distribution rate/labor’s share of earnings, employment – declining (information, manufacturing); capital surplus, external earnings – rising

By carefully tracing back through US financial and economic data, we can see that major discontinuity shifts occurred in the US around the year 2000. The first shift that occurred in the year 2000 was towards a dramatic surge in corporate earnings. Whether we examine the absolute amount of profits earned (Fig. 3), or look at corporate profitability as calculated by dividing corporate earnings by nominal GDP (Fig. 4), the shift in corporate profitability that originated in year 2000 is extremely easy to spot. The profitability of American companies had been steadily declining since 1960 but started to rise very sharply from a major bottom established in 2000. Why did this dramatic shift start in the year 2000? A direct cause of this phenomenon was the decline recorded in the labor distribution rate (i.e. in labor’s share of earnings) (Fig. 5). The year 2000 was the turning point after which the level of the US labor distribution rate began to drop dramatically. Previously, the proportion of labor remuneration, including welfare programs, to GDP had fluctuated in a tight range of between 62% and 65% since the 1960s, but this began to fall steeply from the year 2000 onwards and the current level is now at a historic low of 57%. This huge fall in the labor distribution route clearly represents a structural shift of some sort, whether in terms of a major rise in productivity, or because companies have become enables to reduce the labor resources that they were obliged to deploy so as to be able to run their businesses effectively. Consequently, it's fair to say that as the labor distribution rate declined so corporate profitability started to rise to a great extent in response.

Figure 1: US rates of return and interest rate

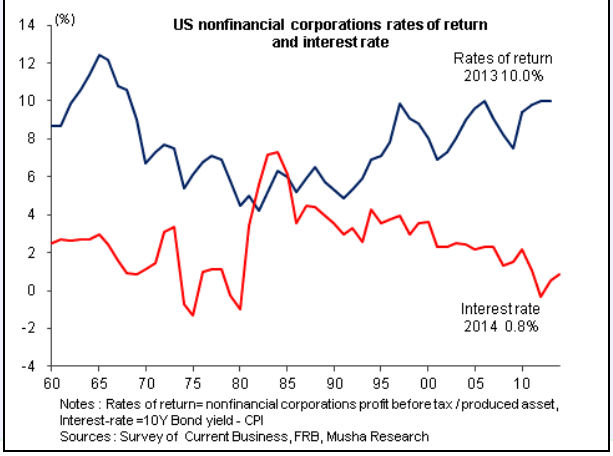


Figure 2: US ROE and LT interest rate

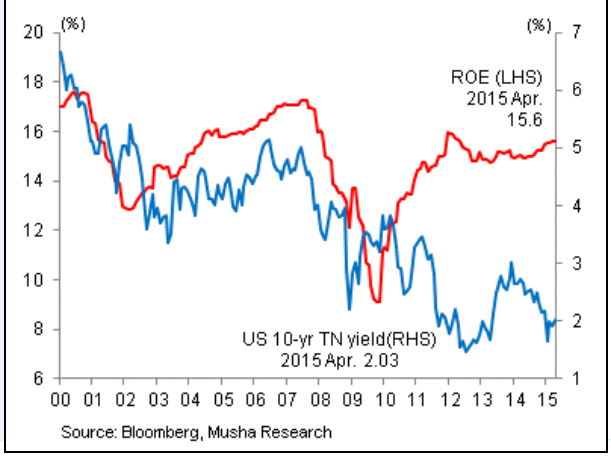


Figure 3: US corporations after tax profits

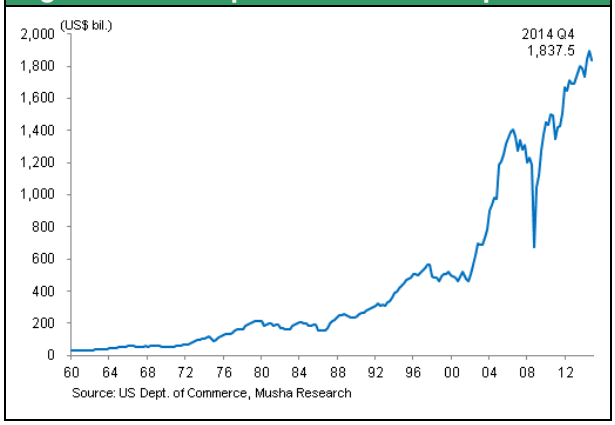


Figure 4: US corps after tax profits / GDP

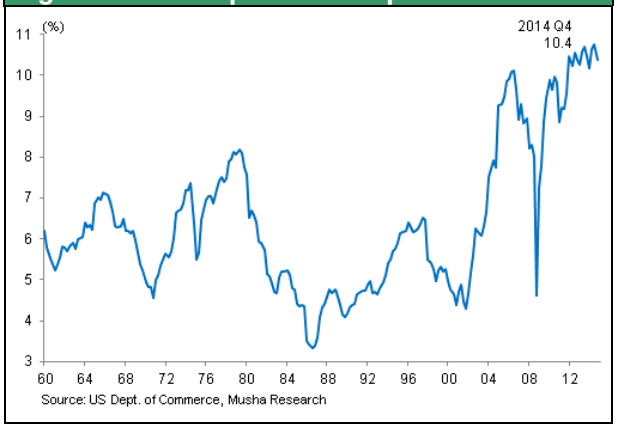


Figure 5: US labor distribution ratio

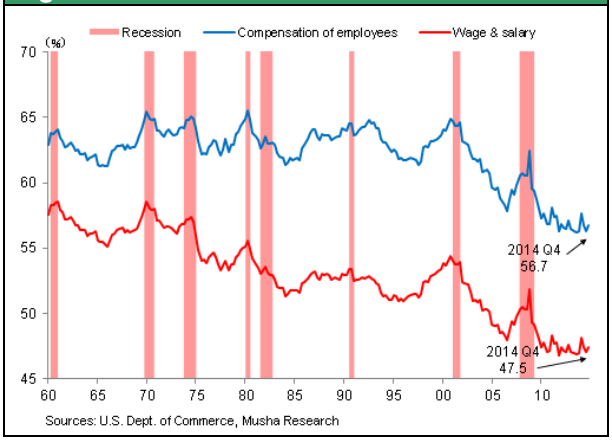
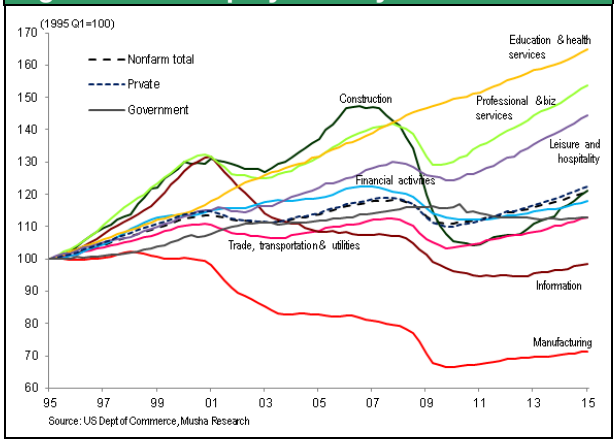


Figure 6: US employment by sector



Another closely related trend in this regard is the changes which we can observe in the employment situation in and around the year 2000. On a sector basis, we can see that the trend in the number of employees (Fig. 6) illustrates the version for employees in the information industries which had been consistently rising to date shifted to a downward trend from the year 2000 onwards in sectors like manufacturing industry and information industries, employment in leading companies or leading sectors in the US can be seen to have entered into sustained and continuous declining phase.

Moreover another shift that occurred in the period around the year 2000 was clearly a discernible emergence of surplus capital. As Fig. 7 shows, if we look at free cash flows from the (non-financial) corporate sector (i.e. whether or not there was insufficient or excess capital) from around the year 2000 onwards we can clearly see that the US corporate sector which had, if anything, previously been in a state of having insufficient capital, was now generating large amounts of excess capital. In other words, from the year 2000 onwards, we started to discover that their wallets were remarkably full. In fact, the corporate sector had suffered from chronic shortage of capital and was the receptacle of excess household savings. However, the situation changed dramatically in the year 2000.

Moreover, as we can see by tracing the trend in the income balance shown in Fig. 8, the US was a heavily indebted nation until 2000 and as a result its net income balance was at a very low level, but from the year 2000 onwards its income balance shot up dramatically and, despite the fact that the US remained an enormously indebted nation, it became evident that it was also becoming one that could boast the ability to generate conspicuously large amounts of external income. This income derived from dividend income or patent fees etc., and as such are included funds transmitted back to the parent company in the form of overseas earnings from corporate subsidiaries, but this income balance also demonstrated a dramatic rise from the year 2000 onwards. As we can see in Fig. 9, the US is the world's largest debtor nation in terms of its current account balance and this has not changed over the course of the past 30 years. Consequently, despite the fact that the nation's accumulated debt (viewed in terms of the accumulated current-account balance) has continued to steadily increase, the income balance is also soaring. This marked recovery in the return on capital now accompanying direct investment contributed to the improvement of income balance.

Figure 7: US corporations cash flow

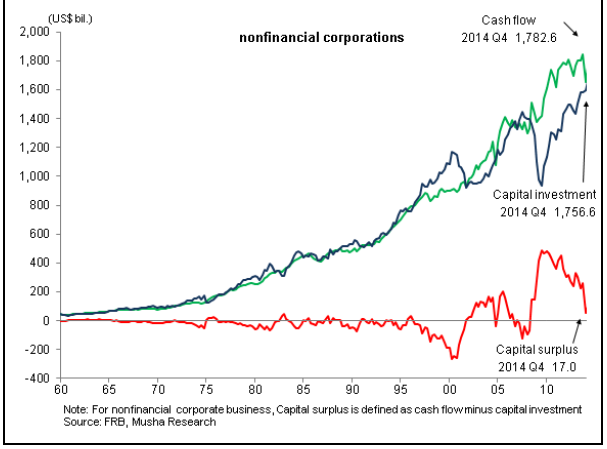


Figure 8: US net income and accumulated current account balance

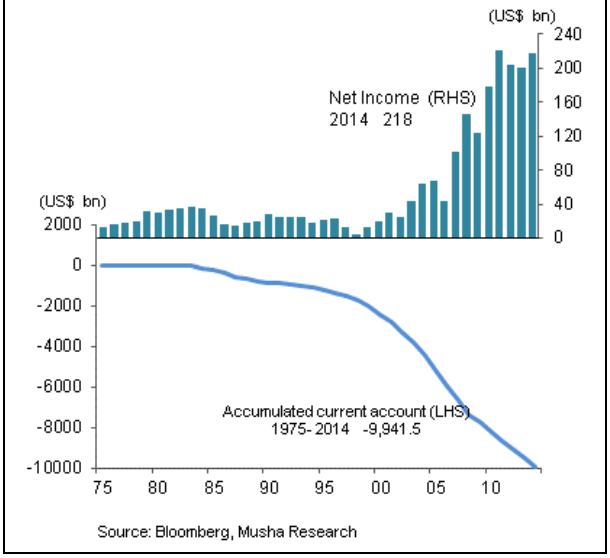
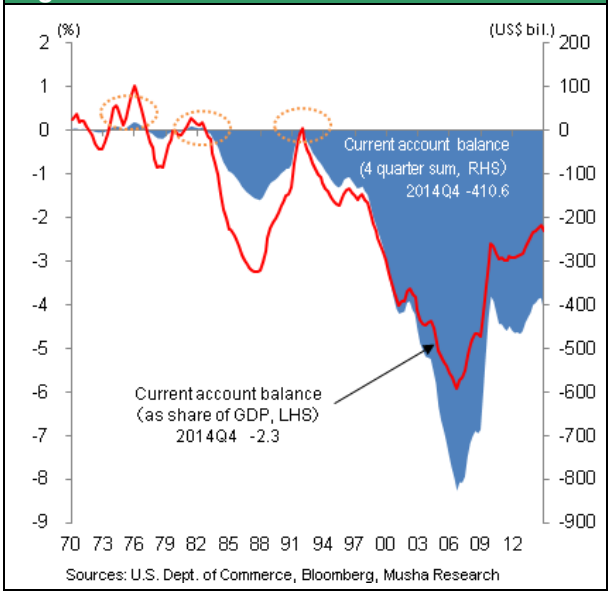


Figure 9: US current account balance



(2) Discontinuity shift that occurred in the US around the year 2000, financial aspects

Looking back over this series of developments, it is certainly true that a major structural shift occurred in year 2000 but perhaps it might be reasonable to claim that this structural shift was actually a revolution in productivity in the US. Therefore, we would like to examine and explain this structural shift in greater detail given that it also triggered various changes in the financial sector too.

The formation of the bubble

The primary change that occurred in the financial sector was the beginning of the huge inflation of a housing bubble in the US from year 2000 on. Fig. 10 illustrates the ratio between the current value of real estate assets owned by households and GDP and shows that this ratio started to rise sharply from the year 2000 onwards. Excess capital found its way into the financial markets and started to work a great deal of mischief as the graph clearly illustrates. From around 2000 onwards the price of US real estate spiraled, as we can clearly see from the index of the residential prices for the 20 major cities across the US (Fig. 11). It goes without saying that the IT equity bubble was also formed and burst in 2000.

The 'riddle' of declining long-term interest rates

There was another shift that became firmly established in the US from around the year 2000 onwards and this was something that the former FRB Chair Alan Greenspan used to frequently insist on referring to as a 'riddle'. At the start of the previous decade economic conditions were good and although financing was also tight, a trend started to establish itself whereby long-term interest rates didn't rise. Fig. 12 illustrates the US nominal GDP growth rate and movements in long and short-term interest rates. The blue area graph plots the growth rates for US nominal GDP whilst the red dotted line graph shows the yield on the 10 year Treasury bond, and the green line graph gives the

short-term policy interest rate. Former FRB Chair Greenspan said that the phenomenon shown here was a 'riddle' in that, despite the fact that he had started raising the short-term policy interest rate about 10 years earlier in 2004 – 2005, and also despite the fact that the long-term growth rate for the US economy is extremely strong at 7%, long-term yields have consistently failed to rise over a long periods of time and still continue to languish at low levels. This phenomenon was temporarily erased by the Lehman Shock, but once the shock had receded long-term interest rates continued to flat line at low levels despite the fact that there was a strong renewed recovery in the nominal growth rate. Greenspan's 'riddle' has thus continued to perplex observers for a period of more than 10 years now.

Figure 10: Real estate value (household) / nominal GDP

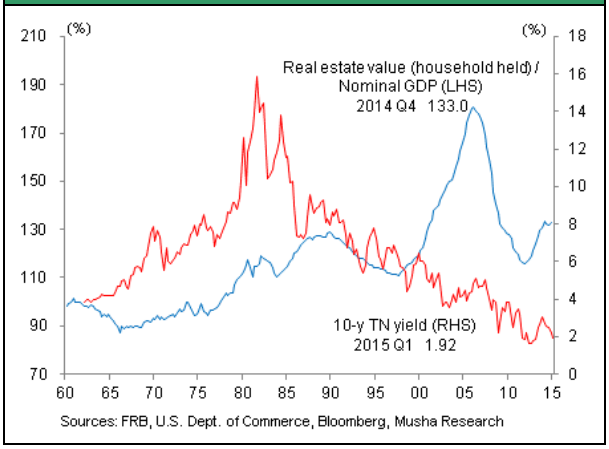


Figure 11: S&P/Case-Shiller home price index

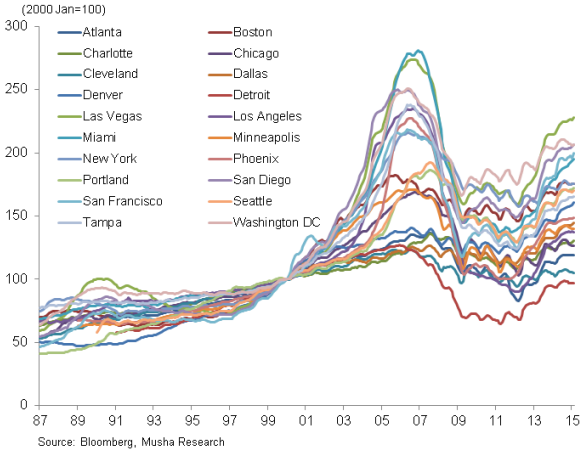
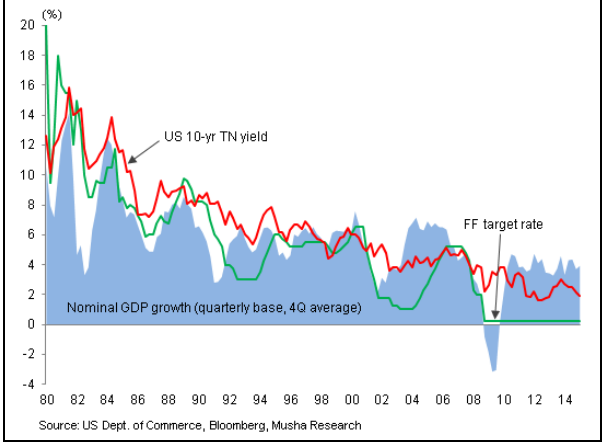


Figure 12: US nominal GDP growth rate, FF target rate and 10-y TN yield



Former FRB Chair Ben Bernanke, who headed the FRB at the time, has commented that and a global savings glut pushed down US interest rates at a time when the phenomenon had also entered the US. This was certainly one factor but I had my doubts about this explanation at the time and I pointed out in several reports at the time that the conspicuous excess savings in the US corporate sector (Fig. 7) coincided with the occurrence of this global savings glut. Moreover, following the Lehman shock this became ever more clearly evident. That is to say, former FRB chairman Greenspan called it a 'riddle' that in an environment in which interest rates were languishing in an apparent disconnect from both the prevailing economic reality and policy, was an excess of savings in the corporate sector - but perhaps there is a single explanation to this apparent paradox.

A divergence between corporate profitability and interest rates

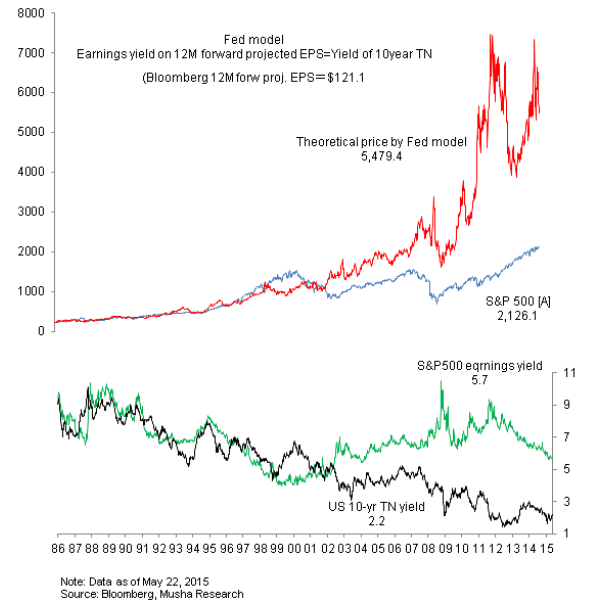
Just at the time that this shift became apparent from about the year 2000 onwards, a simultaneous divergences between corporate profitability and interest rates also started to manifest it. As we can see in Fig. 1 at the start of this report, the trend in the relationship between profitability in the US corporate sector (book value basis) and interest rates displayed a certain degree of correlation between 1995 and the year 2000. However from 2000 onwards corporate profitability began to rise whilst interest rates started to decline resulting in an ever widening degree of disparity between the two sets of data. This has been particularly evident recently with ROE (as you can see in Fig. 2), the benchmark measure for corporate profitability in the US, rising very dramatically but the representative interest rate, the long-term Treasury yield, continuing to decline steadily, with the result that the gap between the two, which can be described as the risk premium, remains inflated to an unprecedented degree.

Shift in equity price formation, fair value has disappeared

Another major shift that occurred in year 2000 was a complete breakdown in the functioning of the FED model in the formation of share prices. Fig. 13 is a graph of the FED model displaying the fair value for US equity prices. The FED model is a simple model that is based upon the assumption that equities are at fair value when the equity yield = the yield on the 10-year Treasury bond but until the year 2000 (excluding the period of the formation of the IT bubble in 1999) this FED model functioned almost perfectly. That is to say, if interest rates rose and bond prices fell, share prices would simultaneously drop and earnings yields would rise so that the perfect arbitrage relationship be created between the two instruments. Movements of funds into and between the bond market and the equity market took place because of a process of feedback between the two. However from the year 2000 onwards, US share prices had completely lost their arbitrage relationships with both earnings and long-term interest rates and so, from that year on, a situation had arisen in which it is fair to say that the yardstick for fair value for equity prices had also disappeared. Despite the fact that long-term interest rates continued to decline, equity prices fell, earnings yields continue to rise, with equity earnings yields > the yield on the 10 year Treasury bond, in a situation of continued inequality that persisted for a long period as the divergence between the two continued its long march expansion towards 2012.

As a result of this situation, the long-term rise in equity prices came to a complete halt in the year 2000. The share price index (DJI) hit $10,000 in 1999 but over the course of the subsequent 10 years or so it remained anchored in the doldrums around the $10,000 mark until 2011. The entrance to this phase had been the year 2000. The most fundamental cause of this dramatic shift in the equity market was the major alteration in the structure of the economy that happened in the year 2000.

Figure 13: Equity fair value by FED model, S&P500 earnings yield and 10-y TN yield



Perhaps the best way of explaining all this in detail, that is to say structural shift that occurred in the year 2000, would be to say that it was an extremely remarkable and radical event. However, no one can say why happened or provide and analysis that explains it. Whatever dramatic shift occurred in the year 2000 it is almost certainly fair to say that it has sparked the biggest debate that is currently underway in academia today.

(3) Analysis of the dramatic shift that occurred in the year 2000: New industrial revolution led to striking changes

Result of the new industrial revolution: an unfettered rise in productivity

The November 24, 2014 edition of the Wall Street Journal published an article by Professor Alan S. Blinder of Princeton University entitled 'The Unsettling Mystery of Productivity'. In this article the Professor referred to the failure of US labor productivity to rise as an extremely big mystery, questioned how such a thing could have happened, or even whether it actually had occurred or not. In the same way, an article appeared in the November 20, 2014 edition of the Nihon Keizai Shimbun (Nikkei) containing an interview with Professor Martin Feldstein of Harvard University. Professor Feldstein also expressed serious doubts about whether US productivity had failed to rise and in particular about whether government statistics had failed to properly account for the degree of innovation deriving from computer science and biotechnology with the result that the new industrial revolution that is currently underway, and the results deriving from it, may well be driving an increase in productivity that is now emerging and that perhaps the

failure actually lies in the fact that we are unable to quantify these developments at present since we cannot appreciate their significance from the statistics as currently presented. (Actually, I already raised this issue some ten years ago and have subsequently referred to it many times in several reports that I have written since). In a situation in which rising productivity is not properly captured in statistical terms the result is that excess human and financial resources automatically triggered by the increase in productivity are (mis)interpreted to be merely economic accidents.

New industrial revolution creating excess labor and capital

To explain this, I would like to introduce and to quote from a work called 'The Second Machine Age' that was co-authored by Professors Erik Brynjolfsson and Andrew McAfee of MIT and published at the beginning of 2014. According to this book, the human race is currently in the process of encountering a second industrial/machine revolution. In the industrial/machine revolution that occurred 200 years ago, the physical labor supplied by human manpower was replaced by substitutes such as the mechanical power deriving from steam engines, etc. which resulted in the need to use physical labor disappearing and rendering people redundant. Nowadays, probably the only people that one can reasonably claim use muscle power in their work are athletes and professional sportsmen and women. Everyone else is basically a machine operator of some kind or another whether he or she works on farms or as employees in the construction industry on building sites. Spades and hoes have been replaced by tillers and tractors whilst in the construction industry shovels and spades have been similarly replaced by power shovels and bulldozers. In the same way that we can say that the human race was liberated from (rendered unemployed) manual labor by the first industrial/machine revolution, we must now ask ourselves what is this second industrial/machine revolution actually is. Well, it would appear that human intelligence and the brain work undertaken by human beings is now in the process of being substituted for and replaced by new developments such as artificial intelligence, 3-D printing, and the Internet and other digital technologies. If things go on as they are it looks very much as if the intellectual labor and brain work of human beings will no longer be required by the economy. That is to say, human beings will have no need to do manual work, and no need to use their brains either since everything will be taken care of by machines and robots. As a result, the entire human race will become unemployed and the question will then arise of what sort of era these developments will usher in.

Absence of policy response to rise in unemployment will destroy the economy

It's undoubtedly the case as this process is currently being realized right now and right in front of our very eyes as productivity soars as a result of the unprecedented Internet revolution, or thanks to the various other types of bio- and other technological revolutions that are happening all around us today. Consequently, a hitherto unprecedented degree of surplus will be created on a completely new scale. This will take the form of excess labor and excess capital. This is the biggest and most remarkable feature of the process of change that we are currently undergoing as unprecedented technological development pounds the further evidence of the new Industrial Revolution deliver rising levels of productivity but also bring these other results that will manifest themselves in huge structural change. But where on earth is this rising productivity actually happening? Of the places in which it can already be seen is in labor productivity. As labor productivity rises, the amount of labor that needs to be deployed for the conduct of business can be greatly compressed with the result that more and more people will become surplus to requirements. Thereafter, a rise in another measure of productivity, higher capital productivity, will occur and will manifest itself in a striking reduction in the prices of equipment and systems. The amount of capital that will be required to be injected so that business can be conducted will shrink to a large degree and this in turn will result in excess capital.

Consequently, we can conclude that the process of reduction in employment that is currently underway in the US corporate sector and the buildup of excess capital are clearly driven by excess of labor and capital created by productivity gains and the industrial revolution. Looked at from this perspective, the economy delivered by the second machine revolution spoken of by Professor Brynjolfsson and the impact that it is exercising on finance is actually something that is quite startling and shocking. It's possible to speculate in fact that what happened in and around the year 2000 could have caused the structure of the economy to change in a very dramatic way. If, for example, the results of this rising productivity is that the deployment of human resources and capital is no longer required then even if interest rates fall whilst wages are not rising it would be entirely natural for companies to be able to profit simply by enjoying the benefits of cost compression. That said, if a rise in productivity of this kind were to progress further, then both capital and human resources would both become surplus to requirements, whilst on the other hand situation would be created whereby only companies flourish and this would lead inevitably to the destruction of the structure of the economy itself. What Professor Brynjolfsson is hinting at in 'The Second Machine Age' is that the reality is that such a cataclysmic future is quite possible whereby we might have a situation in which, depending on the circumstances, there could be a large number of companies doing extremely well but also one in which we find ourselves in the world in which we have no role or job to do.

(4) Economic policies change destiny – An historical experience

The errors of the anti-growth stance are like a joke

The reality is that all sorts of different problems arising in America today - the fact that employment just refuses to increase, and that the current economic environment is one in which an excess of capital is being accompanied by long-term yields declining to historical lows, and we have no alternative but to think that these results are emerging

because of these issues. Then what exactly lies ahead for us? That depends on the policies we choose. In a policy-free environment, excess supply of both human and capital resources would be set free, with the possibility also remaining that a pessimistic outlook in which the economy itself might be destroyed could become evident. Naturally, because it's clear that the same work that we have been doing to date will be done for us by computers in the future, and so if the size of the economy remains the same as it is now, it's imaginable that the economy will be destroyed by limitless rise in the amounts of excess human and capital capacity.

In 2012, Mr. Yukio Edano, the Democratic Party's Minister of Economy, Trade and Industry (now the Chairman of the Party and someone whom I considered to be an upright and resolute politician) wrote a book called 'I Have to Say This Even If I Get Abused for It' which was published by the Toyo Keizai Shinpo Company. As a clean, resolute politician he felt that it was his duty to say what he felt even if voters didn't want to hear it and even if it upset them to be told such things. Such was the content of the book at the point that he was emphasizing in writing it he expressed thus: 'please abandon the illusion of working as hard as you can so that you can achieve a better life by earning a higher salary, this is an era in which we have no expectations of, or hope for, growth'. This is a philosophy which appeals to Japanese people in some way and to a certain extent, but in many of its most fundamental aspects the book perpetrated some extremely serious errors. To give some flavour of what these mistakes were, and regardless of how Mr. Edano thinks about it, if the situation remains largely unchanged in terms of the current scale of the economy, excess supply of both human capital resources will inexorably continue to expand because of the automatic rise in productivity generated by the progress being made by the technological revolution and this will mean that everyone will end up unemployed having finally been replaced by robots who have taken over the work that we currently through ourselves. In other words, the argument that proposes that there is no need for the economy to grow can be considered to be one in which excessive supply of human and capital resources should be left alone to simply increase unchecked and this can only be thought of as being and extremely foolish and irrational theoretical proposal. That said, it seems to me that a large number of people are quite happy to listen to the anti-growth and growth denying theories spouted by people like Mr Edano and we can only assume that this is because they get great comfort from hearing things which they find it pleasant to listen to.

What we can learn from the mistakes of the great depression

The psychological mindset that accepted anti-growth policies and the abandonment of any economic policy whatsoever ultimately ushered in a huge disaster. We all know that the adoption of this sort of thinking resulted in a devastating destruction of the economy in the US some 80 years ago. This, of course, was the Great Depression. The share price slump that began in October 1929 in the USA ultimately resulted in a decline of some 89% over the course of the subsequent 3 and a half years and destroyed wealth on an almost inconceivable scale. And subsequently there ensued a very destructive period of economic difficulty which persisted for a long time thereafter. Why did this great depression occur? The US president at the time, Herbert Hoover, had a similar mentality to that of Mr. Edano and throughout the whole of the four-year period following the original crash in share prices in 1929 during which there was remarkable increase in excess capital and labor, he continued to implement fiscal tightening policies. As a result, the economic difficulties which should, had everything gone well, turned out to be not particularly severe, actually developed into the great depression as we know it. The crash and panic started in the US in 1929, but a policy of financial easing was not implemented until four years later once the next president, Roosevelt, had taken office in 1933. In a time of excess human and capital resources, the anti-growth political measures implemented by President Hoover on the basis of a debt clearing, account settling ideology, merely served to usher in a highly destructive period of economic chaos, deterioration, and ultimately the Great Depression itself. I think it's fair to say that the Democratic Party administration in Japan and the policies of the Bank of Japan under Governor Shirakawa which were pursued until two years ago strongly resemble those that I have outlined above in nature.

In the era of the recent Lehman Shock too, a period of economic dislocation similar to that experienced in the Great Depression of the 1930s was experienced. The rise in productivity deriving from the technological revolution, combined with the increase in excess labor and capital resources as a result, strongly resembles the economic situation which followed the havoc wreaked by the Great Depression that began in the latter half of the 1920s and the aftermath of the Lehman Shock. In that era too, the emergence of oil as a source of energy, the spread of electric power, and the integration of markets across America thanks to the creation of the railroad network sparked a technological revolution and accelerated a remarkable increase in productivity across the nation. That said however, the policies implemented at that time and those currently in place are diametrically opposed to each other. Former FRB Chair Bernanke implemented a policy of quantitative financial easing immediately after the share price crash triggered in 2008 by the Lehman collapse. Just as in the time of the Great Depression, the disruption to the economy caused by an excess of human pounds capital resources due to the fact that there was no policy-free policy over the subsequent four-year period thereafter, meant that it was possible to limit the recession on this occasion to a remarkably minor one by comparison. If we think in this way about the results of the rise in productivity and the ways in which the resulting increase in excess labor and capital resources can be dealt with, then perhaps we could say that understanding how to deal with then is the key, both precious and decisive, to controlling their impact on the economy and on markets. The stock market rally in Japan from November 2012 onwards was surely the result of Abenomics, policies of demand creation, and the quantitative easing pursued by BOJ Governor Kuroda. I think that if we look at the situation from this perspective it's pretty clear that in periods in which surpluses of human and financial resources arise as a result of increased productivity we can say that we understand what sort of policies we need to implement and that examples of failure on this front have resulted in enormous crashes and economic downturns.

Examples of success in raising productivity have triggered prosperity for the human race

So, if we consider what these examples of success actually are, by looking back on the history of human agriculture in both Japan and the US, the answer is actually quite obvious. Fig. 14 shows the trends in agricultural productivity in the US but I would like to go on to explain how the phenomena of excess human and capital resources deriving from increased productivity were experienced by humans as far back in history as 200 years ago. We can see from Fig. 15 the proportion of the number of employees in the US accounted for by agricultural workers: this was 74% in 1800, 40% in 1900, and has dropped to just 2% today. Clearly the proportion of agricultural workers in the total has declined dramatically but in explaining why this phenomenon occurred, it is pretty obvious, and almost goes without saying, that it was due to a dramatic increase in agricultural productivity. 200 years ago it was possible to feed 100 people with the labor of 74, but nowadays it only needs two people working to fill the bellies of 100 (Fig.14). Consequently it is clear that 98 of every hundred people nowadays are unemployed in terms of being employed in agricultural occupations. So, once these people have lost their jobs in agriculture, did this mean that they found themselves lost and wondering about by the wayside, or not? Obviously the people affected were able to find occupations in jobs that were in sectors and industries other than in the agricultural realms in which they had previously found work.

Figure 14: US farmer population / total employment

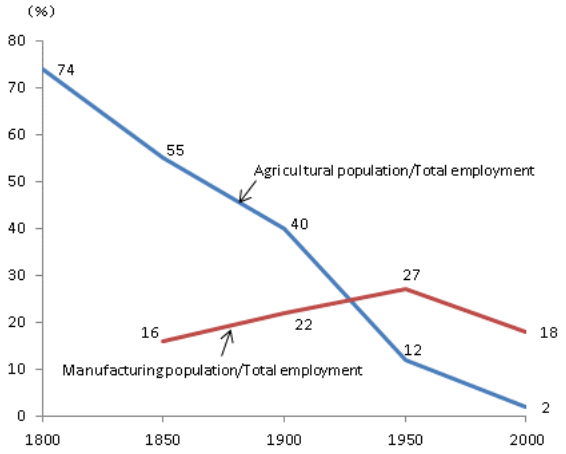
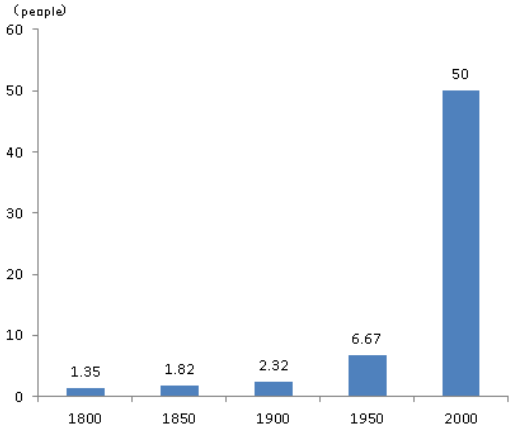


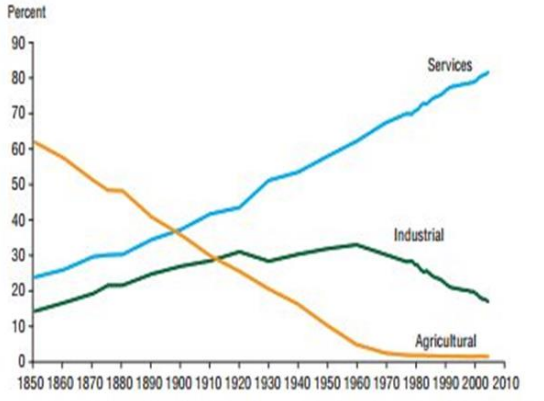
Figure 15: US agricultural productivity



New employments and industries have been born

People are now employed in new industries that did not exist 100 or 200 years ago. The best and simplest way to say what these new industries are is to say that they are industries that make people's lives better. As we can see from Fig. 16, the number of people employed in agriculture has decreased dramatically whilst on the other hand, there has been a huge increase in the number of people working in manufacturing industries which started to replace these agricultural jobs up to about the 1950, and now we can see that recently these have in turn been replaced by a burgeoning process of increase in the numbers of people employed in the service industries nowadays. In fact, in a way all of these industries are service industries in that although the labor which we previously supplied has now been almost entirely substituted for with that delivered by machines. Such being the case, what human beings actually supposed to do? Industries which need human beings to operate can be thought of as being industries that exist for the sake of human beings. That is to say the industries that we enjoy and the industries which make our lives and lifestyles richer, or industries which raise the level of human lifestyles, the education industry, the medical industry, the entertainment industry, are all industries which enhance the quality of human life and so are those in which human beings will be employed in greater and greater numbers in the future.

Figure 16: US employment composition ratio by sector



The key is raising lifestyle levels = lowering Engel's coefficient

What mentioned above means lowering Engel's coefficient. Fig. 17 illustrates the rise in agricultural productivity in the US and the emergence of labor and capital surpluses. In ancient times, including animals, all humans worked around the clock to produce food and foodstuffs 24 hours a day. However, nowadays only two people in every hundred work in this way and so the number of unemployed people in agriculture has risen from 0 to 98. The rise in productivity in agriculture has generated a dramatic increase in number of unemployed in the agricultural industry as a result. This has also resulted in a simultaneous excess of employment in the form of an exodus of products which, in other words, is the same as saying that it has resulted in an excess of capital. There has been a shift from a situation in which the amount of food produced by one person is just enough for consumption by one person so that there is zero excess to one in which the amount of food produced by one person leaves an excess equivalent to food for 49 persons and this excess is an excess of capital. In other words the rise in productivity creates simultaneous surpluses of labor and capital resources. As the new industrial revolution continues to raise productivity, corporates are seeing rising capital surpluses, and companies are also experiencing excess levels of labor resources as well.

Figure 17: Improvement of agricultural productivity and subsequent capital surplus generated in U.S.

	Farmer ratio	Unemployment (= non-farmer)	Production surplus per person	Total surplus	Engel's coeffecient	Labor productivity
Ancient times	100%	0%	1-1=0.00	0	100%	1/1=1
1800	74%	26%	1/0.74-1=0.35	0.35×74=26	74%	1/0.74=1.35
1900	40%	60%	1/0.40-1=1.50	1.5×40=60	40%	1/0.4=2.5
2000	2%	98%	1/0.02-1=49.00	49×2=98	2%	1/0.02=50

Source: Musha Research

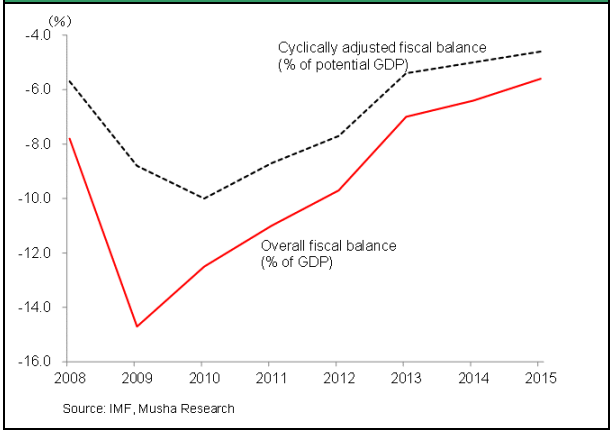
Despite this situation however, there were almost no examples of capital surpluses until recently and equally there were almost no unemployed people either. This is because new sources of demand were created outside of those that had previously existed. By explaining what this is, the relationship with the lowering Engel's coefficient becomes clear. In the past the human race was entirely fixated on food. Today people want to wear nice clothes, live in nice houses, enjoy nice leisure activities, receive good medical treatment, and benefit from a good standard of education, so that they could enjoy what we would call wonderful life. This has been made possible by the fact that out of an income of 100, for example, only 2 is spent on food, with the remaining 98 available for enjoying goods and services other than those related directly to food. Consequently, because the number of people employed in industries that set out to satisfy this 98 has increased and is increasing, industries have emerged for enhancing human lifestyles rather than merely operating as industries for the sake of feeding the population. This has meant a reduction in Engel's coefficient as that humanity has developed with the result that today's population can enjoy the standard of living far above that enjoyed by royalty and members of the aristocracy as recently as 100 to 200 years ago. These are surely the principal benefits that the development of technology and the increase in productivity resulting from it have delivered and this is clearly differentiated from the pattern established in the area of the great depression when surpluses of labor and capital rose exponentially and threatened to destroy the economy as a result. By deploying human and capital resources, and thereby greatly raising the level of consumption in society, Engel's coefficient has necessarily declined as a direct result, as economic development has delivered a richer lifestyle to the population and perhaps, as a byproduct, has thereby been enabled to drive up share prices too.

Consequently, the existence of surplus labor and capital as productivity rises means that these surpluses must be utilized for creating demand. In democratic countries, demand creation equates to a higher living standard. Spending is a virtue. People need to be encouraged to seek a higher living standard and receive support to achieve that goal. Demand will not grow if people merely live as they did one year ago. If people aim for a 10% or even 20% improvement in their standard of living, demand should also rise by the same amount. The result would be the utilization of people and money. This is how to create demand.

Today, people in Japan are debating the relative advantages of anti-growth measures and reflationary measures. The outcome will determine whether Japan selects policies that ignore demand creation or policies that promote demand creation. What does Japan need? Isn't the obvious answer actions that will put people and capital to work? Accomplishing this will require demand creation measures, which means quantitative easing in financial terms. Unfortunately, most economists, market participants and government policymaking organizations still do not embrace this view. This is why we are seeing the widespread belief it is incorrect to use reflationary policies or spending to create demand. These people are not focused on the true issue of utilizing surplus capital and labor. This is similar to the view of prioritizing balance sheet improvements with backward-looking actions like eliminating budget deficits and non-performing loans. Adopting this view will allow the surplus of capital and labor to make the economy become even worse. But this policy debate has not reached its conclusion yet.

In the United States, the outcome of this policy debate has been decided. There is almost no criticism or rejection of quantitative easing. Furthermore, most leading economists agree that the U.S. economy needs demand creation driven by fiscal initiatives. This includes Paul Krugman, Joseph Stiglitz and Lawrence Summers. The U.S. budget deficit peaked at 13% of GDP but is now only 2.8% (Figure 18). Prominent U.S. economists have at last started saying that the time has come to increase public-works and other spending to create demand. This is the philosophy of economists behind the policies that have made the U.S. economy the current world leader. Backward-looking actions are no good. Fiscal and monetary policies aimed at growth backed by more demand have enabled the United States to achieve a strong economic recovery and generate the world's highest returns on stocks.

Figure 18: US fiscal deficit

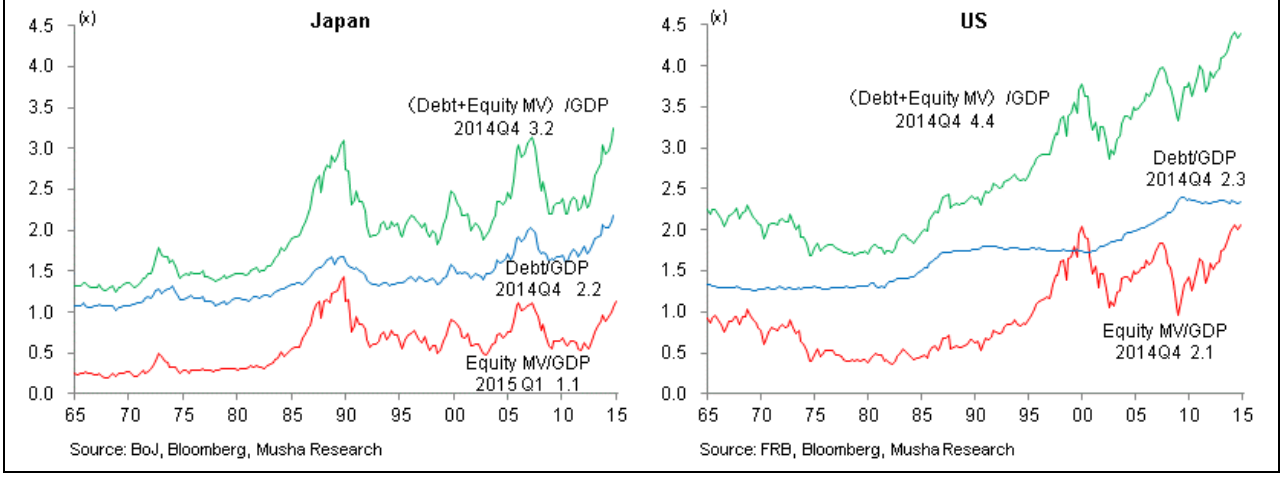


(5) Where should stock prices be right now?

The flexibility of changes in the proper level for stock prices

The next point is determining what level of stock prices can be justified. But we need to think about the proper price level by abandoning conventional thinking. Figure 19 shows changes in the ratio of market capitalization, defined as the sum of stocks and debt, to GDP in Japan and the United States. Looking at debt or stocks, this ratio in the United States is similar to or even higher than the high ratio before the IT bubble. Most people who look at this graph will conclude that the U.S. economy was fueled by a bubble produced by extreme easy-money policies of the Fed. Furthermore, they will probably view this as a perverse and evil policy. The situation in Japan is completely different. Market capitalization has declined steadily after the asset bubble burst 24 years ago. In other words, we must accept the view that financial policies for pushing up asset prices are precisely what revived the U.S. economy and have propelled this economy to near full employment.

Figure 19: Japan & US – Equity MV and corporate debt / GDP



Stock prices are a dependent variable, so there is no absolute basis for a particular price level. Full employment is the most important point. We need to think about the best stock price level for achieving full employment. If we assume that lower stock prices reduce jobs and higher stock prices move us closer to full employment, then the proper stock price level would be higher. If we believe this, then raising stock prices for the sake of reaching full employment would be both just and rational. We are not at full employment today. But one reason is that companies are using less labor in order to earn large profits. As corporate profits are actually good, then it should be easy to see that seeking higher stock prices for full employment is an extremely reasonable stance.

Let's draw a graph with two variables: employment and stock prices. What would happen if we tried to make a graph with 100% employment and a 100% optimal and sustainable stock price? When employment is zero, the economy would collapse and stock prices would naturally be zero as well. When there is full employment and the economy is at the best possible sustainable growth phase, the level of stock prices would be 100%. This relationship of the two variables produces a parabola with a peak where stock prices have increased to the point of full employment. The fair value and market prices of stocks will probably change in the same way. However, a bubble will form if full employment is surpassed and inflation begins as the economy overheats. At first, stocks would climb. However, the part of stock prices above fair value (the bubble portion) would eventually disappear. Stock prices would then return to the sustainable proper level. Consequently, achieving full employment is the most important point. This produces the first problem: We must think about stocks from the standpoint of what level is best when viewing stocks as a variable.

Figure 20: Employment and stock price

Source: Musha Research

Only when earnings and interest rates determine stock prices can the best financial market allocation of capital be achieved

Deciding on the fair value of stocks is the second problem. The answer involves a revival of the Fed model. Since 2000, this model collapsed as stock prices fell to less than half of the fair value. What does this signify? Capital was not flowing to companies even though there were companies with value. Instead, money was absorbed by safe assets like cash and long-term bonds that produce no value. Interest rates fell as a result. Ordinarily, the value of a stock is earnings divided by the interest rate. Earnings are the sum of future earnings and the interest rate is the discount rate. The fair value of stocks is calculated using these figures. However, the Fed model simply replaces future earnings with current earnings and the discount rate with the current interest rate. Predicting the future discount rate and future earnings is impossible. Therefore, the Fed model uses current earnings and interest rates based on the belief that this yields more accurate and realistic stock price valuations.

I believe that the ultimate objective of quantitative easing is to revive the Fed stock valuation model. Since the start of quantitative easing, former Fed chairman Ben Bernanke repeatedly stated that the purpose was to reduce the risk premium. Reducing this premium means generating a capital cycle by creating an arbitrage relationship among bonds, stocks and cash. But this cycle ceased to function immediately after the collapse of Lehman Brothers. Now the capital cycle has finally started moving again in the United States. In Japan, the capital cycle has been idle for more than 10 years.

As a result, we can say that stock prices that cannot be calculated using interest rates and earnings are a lie. There is a view that if interest rates are declining under abnormal circumstances, the interest rates cannot be used as the basis for stock valuations. But this is wrong. Normally, when interest rates are low, the stock returns should also be low (= high PER). When stock prices do not rise despite low interest rates, it suggests that investment in the form of arbitrage between safe assets and risk assets does not occur. In this case we should conclude that the capital allocation function of capital markets has stopped operating. The United States acted quickly to use quantitative easing to revive the Fed model. Now, quantitative easing is the most powerful force behind the U.S. economy. But the opposite circumstances exist in Japan, where this Fed model does not function.

Mispricing on an unprecedented scale

Figure 21 shows the so-called bubble pendulum that I have been explaining for some time. This can also be called a risk appetite pendulum. A bubble caused by excessively high prices existed in 1990 and now there is a bubble caused by prices that are too low. In both instances, there was absolutely no justification for these bubbles. In 1990, the income yield of stocks was 2%, which was only one-fourth of the 8% return on corporate bonds. Stock prices were

obviously too high. In 2015, the stock income yield is 6% and bonds are yielding only 0.5%. But people are not buying stocks even though the return is 12 times higher. Stock prices are too low as a result. In both cases, the large gap between market prices and fair value showed that financial markets were not fulfilling the role of allocating capital properly. In the United States, the financial markets stopped functioning in 2000 because of stock mispricing. In Japan, this same mispricing problem has persisted and the current price gap demonstrates that this problem still exists.

Figure 21: Japan equity earnings and bond yield - Swinging from one extreme to the other

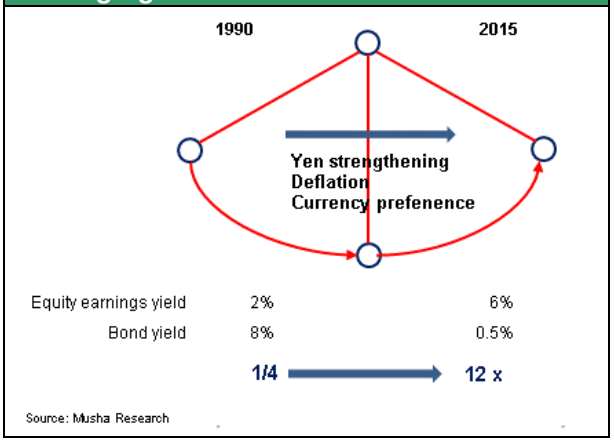
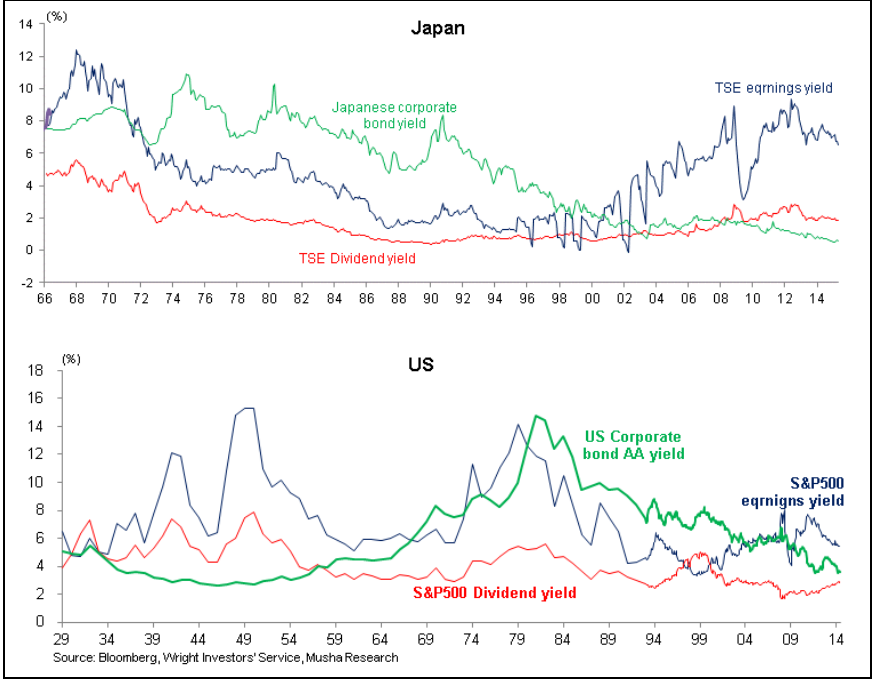


Figure 22 shows the movements of stock income returns and bond yields in Japan and the United States. The data for Japan are on top and begin in 1966. The U.S. data underneath start in 1929. Figure 23 is the stock income yield divided by the bond yield. This graph gives us a general picture of stock over and under valuations and as a result whether or not financial markets achieved desired interest arbitrage. Now, the stock income yield has exceeded 8 and is about 10 times higher than the bond yield in Japan because of low interest rates. Even at the 1990 peak of stock prices caused by Japan's asset bubble, the stock income yield was one-fourth of the bond yield. Therefore, a 0.25 ratio was abnormal then and today the multiple of more than 10 times is abnormal, too.

Figure 22: Japan & US – Yields trends



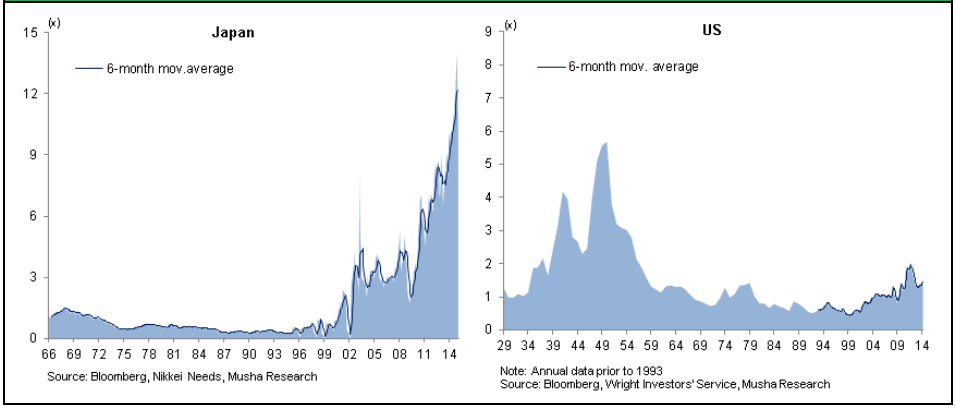
Looking at the U.S. data since 1929, we can see that stocks are still undervalued today because the stock income return is slightly less than twice the bond yield. At their most undervalued point in 1949, U.S. stocks had an income return five times higher than the bond yield. So what happened in the United States since then? The year 1949 was the starting point of a dramatic increase in asset prices that pushed up stock prices ten times over a period of a little more than 10 years. This was also the year that Benjamin Graham wrote the book The Intelligent Investor. Warren Buffet was an avid reader of this book. Mr. Buffet always tells people that they should read chapter 20, which is about the margin of safety. In this chapter, Mr. Graham uses numerous illustrations to imply that the existence of absolutely

safe territory is a possibility. It is significant that this was written in 1949 when the stock income return-bond yield multiple was five times.

Japan's current situation is almost identical to the United States in 1949. This implies that we can expect to see a dramatic stock market rally in Japan. Today, bank deposits yield nothing, government bonds yield 0.4%, the dividend yield on stocks is 1.4% to 1.5% and the stock income return is 6%. This is abnormal. Financial markets in Japan are not at all functioning as a channel for optimum capital allocation.

For more than a decade, people in Japan have been telling themselves that low stock prices are not abnormal because low interest rates would not last long. But now, it has become clear that an increase in Japan's long-term interest rate will be difficult in the current climate of globally low interest rates. Some people view low interest rates as the result of an artificial bond bubble produced by government bond purchases by central banks. So what if there had been no quantitative easing with central banks buying bonds? Would long-term interest rates have moved up? The answer is no. Without quantitative easing, the world would have suffered a severe recession that probably would have caused long-term interest rates to fall even more. In other words, low interest rates are a fair value brought about by fundamentals. The imbalance created by these low interest rates is unusually low stock prices. Raising stock prices will enable financial markets to function again. Money that is now sleeping in so-called safe assets will start moving into other assets. For a long time, I have been saying that these events are about to begin.

Figure 23: Japan & US – Return multiple of equity vs bond



In Japan, we are witnessing the remarkable growth of an investment spectacle that involves many asset classes. People are concentrating solely on avoiding risk regardless of how high returns are on other investments. But this situation is about to change. The reason is that Abenomics is about to produce even more benefits. The policies of Abenomics are aimed at correcting mistaken asset valuations, returning financial markets to normal and ending deflation. Consequently, even in the United States, we will probably see the revival pf the Fed model and interest rate arbitrage in financial markets. However, these events will be much more dramatic in Japan.

In this environment, investors around the world will no longer be able to ignore the mispricing in Japan's financial markets. After all, investors can borrow money in Japan at 0% to buy stocks. With leverage of 50 times, that means a 2% dividend yield is 50 times higher because the principal for a one-year investment is returned with no interest payments. If we factor in capital gains too, this becomes an unbelievably attractive opportunity for leveraged investments. This is the situation in Japan right now. Moreover, the yen's decline means that investors can establish short positions in Japan, which is like creating liability positions. These positions can produce remarkable investment returns. Overseas investors are always stunned when I show them the graphs in Figures 21 through 24 and explain their significance. No one was aware that abnormal valuations have persisted in Japan for such a long time. Investors outside Japan had a vague sense of these low valuations. But the perception was merely that Japan would inevitably change because its unusually low long-term interest rates were caused by a bubble. Investors have not seriously considered all the implications. In fact, the same thing is happening in the United States, Europe and other developed countries. For these reasons, I believe that this is an enormous opportunity for investors. The likelihood of the Nikkei Average surpassing ¥40,000 and the DJIA in the United States surpassing $100,000 over the long term has come in sight.

Figure 24: Abnormally enlarged investment return of Japan

Term deposit (over JPY 10mil., for 2 years)	0.04%
JGB 10yr	0.3%
Dividend yield	1.8%
REIT	3-6%
Earnings yield	6.5%
Operating profit / capital employed (past investment)	7-8%
Operating profit / capital employed (current investment)	10%+α

Note: Data as Apr.30, 2015
Source: BOJ, Bloomberg, Musha Research

Conclusion

A gap of an unprecedented magnitude between profit margins and interest rates exists in Japan and the United States. This gap will probably narrow as long-term interest rates move up (the result of more demand for new capital as the economic growth rate increases) and the income yield of stocks (a profit margin based on market prices) falls as stock prices increase. Elimination of the gap will probably be achieved when demand is created in a manner that is consistent with the new industrial revolution (when full employment is reached). This is the goal of quantitative easing and other measures. Quantitative easing has become the standard for economic policies in industrialized countries and I believe this is certain to cause stock prices and long-term interest rates to increase. The conclusion is that investors should adopt a stance of profiting from the narrowing of the risk premium (stock income yield minus long-term interest rate).