Anatomy of the Bear

Lessons from Wall Street’s Four Great Bottoms

Updated 2009 Edition

Russell Napier
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by Russell Napier
For Karen
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Acknowledgements

This book was written through a frustration with modern capital market theory and also most available financial history books. The first approach downplays the study of history and the second downplays the practical elements of history. The aim of this book is to provide a practical history of financial markets. In doing this I have been inspired by other practitioners who have already made a contribution in this field - Barrie Wigmore (The Crash and Its Aftermath, Securities Markets in the 1980s), Sandy Nairn (Engines That Move Markets: Technology Investing from Railroads to the Internet and Beyond), John Littlewood (The Stock Market: Fifty Years of Capitalism At Work), Marc Faber (The Great Money Illusion and Tomorrow’s Gold) and of course George Goodman aka ‘Adam Smith’ (The Money Game, Super Money, Paper Money). If this book turns out to be half as useful as those authors’ contributions, it will not have been a waste of two years’ effort. If this book also convinces other practitioners that they too can add to the literature of the practical history of financial markets then it will have achieved it goals.

This book would not exist if it were not for Gary Coull, Executive Chairman of CLSA Asia-Pacific Markets. It was Gary’s idea that CLSA get into the business of publishing books and also his idea that I should write one. Although I agreed readily, I delivered very, very slowly. As an employee of CLSA I am an admirer of many of the company’s qualities but the discovery that they also include patience came as a surprise and a relief. I would like to thank Gary and other employees, past and present, of CLSA from whom I have learnt so much over the years: Dr. Jim Walker, Edmund Bradley, Jonathan Slone, Jonathan Compton, Mike McCoy and Richard Pyvis.
It would not have been possible to write this book without access to a great deal of data. In finding that data I was set off in the right direction by Murray Scott, who knows his way around the data mines better than anyone I know. When one data vein appeared to be extinguished, Richard Sylla was a sure guide to a new source and a new field of enquiry. When all else failed and a flight to the US seemed essential, the staff of the New York Public Library came to the rescue and I thank them for their help for someone they have never met many thousands of miles away. This book relies particularly upon primary research in the back issues of The Wall Street Journal. Reading through sixteen months of this venerable daily was a mammoth task and one I probably would not have even contemplated had it not been for the services of ProQuest (www.proquest.co.uk). The ProQuest service offers remote access to every article and advertisement published in the Journal since 1889. While already recognised as a wonderful resource for historians, I think its usefulness to investment practitioners is not yet fully recognised. For those who seek guidance to the investment future a fully searchable database of over one hundred years of WSJ articles is a wonderful resource.

For the past four years, I have been involved in creating and running a course called A Practical History of Financial Markets (www.sifeco.org). I owe this opportunity to learn and contribute to financial market understanding to the trustees of the Stewart Ivory Foundation, a charity which funds the development and running of this course and many other projects. In this task I have been very fortunate in that some of the best minds in finance have agreed to contribute to the project. It has been a wonderful opportunity to learn from a team of authors and teachers who have combined practical experience of more than two hundred years. In relation to this book I would like to acknowledge the assistance of four of the course author/teachers in particular: Michael Oliver, Gordon Pepper, Andrew Smithers and Stephen Wright. Michael and Gordon have done their best to steer me through the minefield of monetary data interpretation necessary in this book. Andrew and Stephen have been kind enough to allow me to quote from their book, Valuing Wall Street. Any errors which may appear in these pages on the subject of q ratios or money are those of the student rather than the teacher. For those who also wish to learn from the teachers please come and join us on the Practical History of Financial Markets course, buy a copy of Valuing Wall Street or Gordon Pepper’s forthcoming publication, The Liquidity Theory of Asset Prices.

I hope this book is now digestible to the average reader. It was not always so. Even hardened investment professionals, such as my friend PJ King, found it very hard going. PJ, in the blunt but kind way perhaps unique to men of
County Cork, made very clear what should be changed. Of course, coming from the other end of Ireland, I did not agree easily to all of this. This is where the Antipodeans come in. Editors Tim Cribb and Simon Harris beat down my rambling prose into something which hopefully is now digestible for all. Without the considerable efforts of Tim and Simon I would probably still be writing and finding more subjects which simply had to be covered. I am neither qualified by aptitude or spirit to be an editor and I admire their skill and fortitude when confronted with such a stubborn author.

In just about every book I have ever read, the author acknowledges the support of their immediate family. Only if you have written a book can you really understand why this is so necessary. I would like to thank my partner Sheila and my sons Rory and Dylan for putting up with my long absences and frequent boring discursions on times long past. In particular I would like to thank my parents for their guidance and support over many decades. Thanks to my father who, as it was to turn out, had already taught me most of what I needed to know about business in his butcher’s shop in Belfast. Thanks to my mother, who taught me that there are many things in life much more important than business.

Russell Napier,
Newbattle, Scotland
November 2005
Foreword: Marc Faber

Russell Napier’s *Anatomy of the Bear: Lessons From Wall Street’s Four Great Bottoms* is an outstanding “must read” for any student of financial markets. Conventional wisdom has it that great market bottoms, which offer lifetime buying opportunities, occur quite soon after devastating market crashes. But, as Russell shows in this book, great bear markets have long life-spans. The key element to identifying extreme undervaluation is to find a period of time “when the advance in stock prices has failed to keep pace with economic and earnings growth” within the system. He shows, for instance, that at its 1921 low, the Dow Jones Industrial Average was no higher than it had been in 1899 - 22 years earlier - while during that period nominal GDP had increased by 383% and real GDP by 88%! Similarly, by August 1982, the Dow was no higher than it had been in April 1964, and was down by 70% in real, inflation-adjusted terms. According to Russell, August 1982 represented the fourth best buying opportunity for US equities in the last century, aside from 1921, 1932 and 1949.

The important message of Russell’s book is that it usually takes a long time - about 14 years - for stocks to travel from peaks of overvaluation to depths of undervaluation, and that the nominal low in stock prices is not always the best time to buy equities. What is more important is the real level of equity prices and the various valuation parameters that indicate deep undervaluation. Thus, while the Dow Jones bottomed out on 9 December 1974 at 570, and stood at the 9 August 1982 low at 769, in real terms it had lost another 15% since the 1974 low.

Investors tend to associate major market lows with total despair among
market participants, panic, depression in the asset class, bankruptcies in the affected sector and overwhelming negative sentiment. But Russell exposes as another myth the idea that stock market lows lead economic recovery by six-to-nine months and that the news is universally bearish at major market lows - by showing that economic improvement and better news in the media led the four major 20th Century stock market recoveries by several months.

Russell has filled a void with Anatomy of the Bear. It is the first book to my knowledge that traces, with many pertinent insights, the swings of US stock prices from undervaluation to overvaluation and back over the last 100 years. The book provides much food for thought. If equity prices swing between over and undervaluation, other asset markets such as real estate, commodities and bonds will do the same. Thus, I suppose that, in the same way US bonds were grossly overvalued in the 1940s, Japanese bonds were grossly overvalued in June 2003, when the yield on JGBs had declined to less than 0.50%. At the same time, the April 2003 low for the Nikkei Index at less than 8,000 may have been this generation’s best ever buying opportunity in Japan.

In fact, the 2003 low in Japanese equity prices and interest rates shared similarities with the 1940s lows in US equities and interest rates. After the 1940s, US stocks rallied into 1973 but bond prices collapsed into 1981. Similarly, the stock market rally in Japan, which began in 2003, could last for many years and be accompanied by a significant bear market in Japanese bonds, which would drive local institutions and Japanese households out of their overweight bond and cash positions, which benefited during the 1990s deflation, into equities and real estate.

Moreover, if, as Russell explains, 1921, 1932, 1949 and 1982 provided outstanding buying opportunities for achieving subsequent high returns -which tended to last for a minimum of eight years (1921-29) but usually much longer - then I suppose that, taking the late April 2003 low of Japanese equities as a generational low, the bull market in Japanese equities could easily last until at least 2010 or even longer and significantly outperform US equities.

Another lesson from Russell’s book could very well be that other Asian equity markets remain grossly undervalued relative to other assets, despite their post-1998 recovery. After all, many Asian stock markets are, in US dollar terms or in real terms, still down by more than 50% from the highs reached between 1990 and 1994. Also if, as Russell outlines, it takes about 14 years for equities to make the journey from overvaluation to undervaluation, the severity of the 20-year commodities bear market from 1980 to the turn of the millennium is evident. Put in proper perspective, commodity prices were, in the 1998 to 2001 period, in real (inflation adjusted) terms, at the lowest level in the history of
capitalism. And, although some industrial commodity prices may suffer from a significant phase of profit-taking in 2006, given that commodity bull markets tend to last between 20 to 30 years, we may just be at the beginning of an extended rise in the price of natural resources.

There is another point I should like to add to Russell’s excellent study. In a world of rapid monetary and credit expansion, extreme undervaluation of the Dow Jones might occur with the Index at 36,000, 40,000 or 100,000 or even more - at stock price levels that were predicted by several analysts in 1999. How so? At present the Dow is at around 10,500 and the price of gold is at $460. Let us assume that, as a result of the Bernanke paper money printing machine - which incidentally has been in existence since the formation of the Federal Reserve Board in 1913 and accounted for the dollar’s 92% loss in purchasing power since then - the Dow Jones rises to 36,000 in the next few years (it will not take another 100 years for the US dollar to lose another 92% of purchasing power, but more likely only 10-20 years). If this was the case, the price of gold could rise from $460 to $3,600. This would bring down the Dow/gold ratio from currently about 25:1 to only 1 - as was the case in 1932 and in 1980! Thus in nominal terms the Dow would have trebled from the present level, but lost significantly in real terms - a scenario I regard as highly probable. This would naturally be devastating for US bond prices.

Finally, I am constantly asked about the best investment opportunities. I think the acquisition of knowledge and a broad understanding of historical price trends may be one of the best personal investments a fund manager, broker or trader can make at this time. I have no doubt that Anatomy of the Bear will become an investment book classic, read by students of financial trends for generations. To read this book is the best Christmas 2005 gift you can give yourself and your friends!

Marc Faber
Hong Kong
November 2005
Prologue, 2007

In the first edition of this book there was a forecast that a rise in inflation would be the catalyst to produce a decline in US equity valuations that would not end until around 2014. The bad news for the forecast is that the S&P Composite Index has risen significantly since publication, but the good news is that the nature of the inflationary risk is today much more apparent.

One of the basic findings of the research in this book is that equity valuations are mean-reverting. Another key finding is that disturbances to the general price level are the key catalyst to instigate such reversion. Based on previous durations and magnitudes of bear markets, the forecast in the first edition was that the cyclically adjusted PE would decline 60-84% and the bear market would end sometime around 2014. Such a decline in valuations can be driven by either a decline in equity prices or a surge in corporate earnings. Some two years later, the cyclically adjusted PE has risen to 29.4x (June 2007) compared to 27.6x at the end of June 2005! A strong rise in the earnings component of the PE has seen valuations rise only slightly despite a 25% rise in the S&P. The price index has now returned to its 2000 high, although in real terms it is 15% below its 2000 peak. While the price index has risen materially in US-dollar terms it is barely changed in sterling or euro terms.

Such rebounds in the index and the cyclically adjusted PE are not abnormal in great bear markets. The S&P peaked in real terms in December 1968 when it was just over 100. In the next 14 years, the index level fell below, but bounced back to the December 1968 level on three occasions. Regularly between 1881-2000 there have been two-year periods or longer when the cyclically adjusted PE did rise within a period of longer decline. A 25% rise in the market may suggest that the bear market has ended - but such
a rise, accompanied by a smaller rise in valuations, is not uncommon in major bear markets.

This book shows how a belief in the sustainability of strong growth and low inflation produces high US equity valuations. It was just such a belief which produced the record high valuations in 2000 and it is becoming increasingly clear how this belief will be shattered. A key driver of the low inflation which resulted in high equity valuations was a peculiar form of economic activity in China. For more than 20 years now, China has been moving towards a market economy while retaining a command-economy banking system. This has resulted in a system that channels credit growth towards fixed-asset investment and exports rather than domestic consumption. This unusual economic model has resulted in the supply of goods almost always outstripping demand. This oversupply has been the key factor in the disinflationary, and sometimes deflationary, trend in the global tradable goods market. It was partly a belief among investors that such trends in prices were structural in nature that allowed a belief in a simultaneous combination of strong growth and low inflation in the US.

The problem for those who believe in the sustainability of high growth and low inflation is that China is finally scrapping the command economy banking system. Since late 2005, there has been a massive acceleration of the process of reform. The central government has accepted responsibility for many of the system’s bad assets. Importantly, the actions of the government have been bolstered by a flood of foreign capital and expertise into the sector. As the banking system now moves to making loans on purely commercial grounds, it is likely that loan growth will no longer target fixed-asset investment and export growth. It is increasingly evident that the road to commercialisation for the banking sector is a road to consumer lending. In that environment, China will become more of a normal economy, in which demand will sometimes outstrip supply and vice versa.

The era of constant oversupply and constant downward pressure on the price of globally traded goods is now over. This change in China is important for US equity valuations as it challenges the ability of the US economy to sustain both high growth and low inflation. Indeed, this change in China could be particularly negative for US equity valuations due to the important interaction between higher imported inflation and US monetary policy.

Since the first edition of this book was published, there has been a change of helmsman of US monetary policy. In numerous public pronouncements the current incumbent has made it clear that he would favour an explicit inflation target for the Federal Reserve. While such a target has no de jure
approval, it seems likely that one has been adopted defacto. If we assume that the inflation target is not dissimilar to the 2.0% target of the Bank of England, then changes in China can impact US asset prices more quickly than we might initially think. The role of quiescent import price inflation has been very important in the apparent death of inflation in the US and the great 1982-2000 equity bull market. In the 20 years from 1981 to 2001, import prices increased by a total of just 1.6%! This stability in prices is in marked contrast to the 370% rise in import price inflation from 1969 to 1981 and the 28% rise from 2001 to 2007.

A following wind of low imported inflation played a key role in the major disinflation, decline in interest rates and rise in asset prices which has occurred since 1981. Indeed, if import prices were effectively unchanged over that period then the considerable inflation that did occur had to be in the non-tradeable goods sector. In short, quiescent imported inflation permitted declining interest rates and rising asset prices, among other things, to help the Federal Reserve to achieve low inflation levels and not price stability or deflation. Of course, if the changes in China result in periods of sudden rises in import prices then it may be the non-tradeable goods sector that needs to deflate to produce a target inflation rate of around 2.0%. The combination of the Fed’s inflation target and the reform of the Chinese banking system could thus augur difficult times for US asset prices.

An inflationary disturbance that would reduce US equity valuations now also seems more likely due to changes in the foreign currency markets. Most readers will be familiar with the many arguments as to why the US dollar should be falling in value relative to other major global currencies. At the crux of such arguments are the scale of the US current account deficit and the amount of capital the US must attract to stabilise the US dollar. There is also a structural argument that the US dollar is less and less qualified to be the defacto reserve currency as the US is an increasingly large net debtor nation. The demise of sterling as the world’s reserve currency came when the country’s debts to foreigners first exceeded the UK’s overseas assets in 1914. The US saw a similar switch to net debtor status in 1989. This combination of cyclical and structural weakness seems likely to force the value of the US dollar down on the international exchanges. However, the US dollar can only fall in value against other currencies if other jurisdictions permit their currencies to rise. It has been evident for many years that Asian authorities are loath to permit the market to revalue their currencies relative to the US dollar.

Asia’s unwillingness to permit market-driven currency appreciation puts increasing pressure on other economies to accept the consequences from the
revaluation of their currencies relative to the US dollar. As a major negative consequence of such revaluation is a loss of export competitiveness, it is not clear which currency would be permitted to revalue significantly against the dollar. The global repercussions flowing from unwillingness to live with strong currencies are inherently inflationary. Any nation that seeks to prevent the rise in its currency relative to the dollar will run a monetary policy which is more lax than it otherwise would be. Such monetary laxity is likely to fuel the forces of inflation - particularly if, as Milton Friedman asserts, ‘inflation is always and everywhere a monetary phenomenon’. At some stage it seems likely that the European Central Bank will intervene to halt the rise of the euro. At such a stage, the inflationary ramifications from the downward pressure on the dollar would become much more apparent.

Why should these overseas forces play such a key role in driving down US equity valuations? The simple answer is that they played such a key role in pushing them higher. By the end of the 1982-2000 equity bull market, the combination of high growth and low inflation was widely attributed to US innovation, US productivity growth and the Federal Reserve’s mastery of its brief. While some of these factors did play a role, the high growth/low inflation economy was only possible due to underconsumption in both China and Japan. That underconsumption, combined with a refusal to permit their currencies to appreciate, brought both disinflation to the US and downward pressure on US interest rates. It is now very likely that China’s benign influence is ending and any sustainable economic recovery in Japan will further undermine the high growth/low inflation US economy.

The key strategic conclusion from this book is that swings in equity valuation are driven primarily by changes in inflation. The global outlook for inflation is now changing and investors must be wary of investing in equities with historically high valuations. The cyclically adjusted PE of US equities has already declined from 39.5x at its peak in 2000 to 29.4x. The good news is that this adjustment has been achieved through stable nominal prices and material rises in earnings. The bad news is that one should expect the cyclically adjusted PE to decline to less than 12x before this bear market is complete. The rise in inflation which will instigate such a decline is now more clearly evident.

Russell Napier
July 2007
The first edition of this book published in November 2005 warned investors to expect a 60-80% decline in the price of US equities. While equities have declined, they have fallen just 43% from their November 2005 level. The bad news is that the long bear market, which the first edition of this book forecast would not end until 2014, still has some way to go. The good news is that we should see a significant rally in the market before the final terrible fallout.

As noted at the end of 2005, the catalyst for the decline in US equities would be ‘a material disturbance to the general price level’. Initially, the disturbance was inflationary, starting from 2002 and forcing US interest rates to rise steadily from 2004-07, at which point the pressure finally became too much for the US housing market, which – in the headiness of the times – had thrown financial discipline out the window. After the real-estate bubble burst, domestic financial institutions began collapsing – but it was not until September 2008, when Lehman Brothers fell with more than US$600bn in liabilities, that the world sat up and took note. In that instant, the global credit system froze as the belief that key financial institutions were “too big to fail” evaporated. As credit stopped flowing and the fuel for consumption ceased, deflationary fear spread and equity prices fell off a cliff. Now it was deflation and not inflation which was acting to depress equity valuations.

As readers of this book are bound to discover, deflationary periods are especially damaging for equity investors. Equity investment is that fine sliver of hope between assets and liabilities and, in times of falling asset prices, it becomes finer still. When the selling price of corporate goods declines, it heightens the risk that companies may not generate sufficient cashflow to
satisfy their creditors. Simply put, when deflation strikes, equity can easily go to zero. Thus a move from inflation to deflation produces a sharp rise in the risk premium associated with the predictability of future corporate cashflow. So while the first ‘disturbance’ may well have been inflation (2004-08), ensuing deflation (2008-09) has inflicted the real damage on investors. As we shall see, the time to buy equities is when deflationary risk diminishes and risk premiums start to contract. As I write, at the end of 1Q09, it seems that markets have overreacted to the risk of deflation and thus another significant rally in the 2000-2014 great bear market is the likely result.

As this book shows, bear markets are usually prolonged destructions of wealth. It is very normal in such prolonged destructions to have significant rallies and the 2003-07 rally is a prime example of this. However, the analysis in this book suggests that the equity bear market will probably not have ended until equities trade at a seventy percent discount to the replacement value of their assets. This would mean that the S&P 500 Index is likely to bottom around 400 in the 2000-14 bear market. The scale of the downside is thus still very significant and should be borne in mind by any investor seeking to play the rally in US equities, which now appears likely.

So what are the signals, taken from this book, which suggest that a strong rebound in equity prices is likely from 1Q09? The key strategic conclusion is that share prices rise when deflationary forces are abating, and the key indicators that predict such abatement are rising corporate bond and copper prices. Signalling that investors foresee lesser declines in corporate sales and thus a lower chance of corporate default, corporate bond rallies have preceded all of the great bear-market bottoms in equities. In recent months, US corporate bond prices have rallied from the very depressed levels seen in December 2008. Similarly, the price of copper has risen materially from its end-2008 lows. This upward momentum does not eradicate the risk of deflation but previous such moves have been a good indicator that deflationary forces are weakening. A continued copper-price rally would suggest that the deflation risk priced into equities will decline and that share prices will rise.

The most recent equity bear market studied in this book ended in 1982. Since then, the US government has launched a new financial instrument, Treasury Inflation Protected Securities, which provides important information about inflation expectations. These securities are the best market indicator of the general price level when compared to an equivalent-maturity US Treasury security. As with corporate bonds and copper, there has been a significant improvement in the price of TIPS since the end of
2008. Also like corporate bond yields and copper prices, TIPS yields are indicating that the extreme deflation many investors were expecting in late 2008 will not materialise. The passing of the deflation risk signalled by all three indicators should be positive for equity prices.

There are many other more subjective and also technical indicators within these pages that point to the same conclusion. Slow market reactions to positive newsflow provide a classic sign, and in this case markets are ignoring major progress in the credit-creation process in the US, particularly in corporate-bond issuance. Auto sales are also likely to bottom before the equity market, and it’s not hard to imagine a pickup from very distressed levels in that area now that credit is beginning to flow again in the US. Further, it is normal for commentators to cite fiscal deterioration as a key reason why equity prices will continue to decline. This has always been wrong; but bears are once again giving this as a reason for a prolonged downturn. It is also interesting that the surprise weakness in the Swiss franc we are seeing now was also coincident with a rebound in US equities in 1932. At that time, it was seen as a signal that capital was leaving its hiding place and once again seeking employment in the world. As you read, you will see many other indicators which may, or may not, seem similar to our current circumstances.

Great bear-market bottoms are binary affairs. If deflation continues, equities decline, and if inflation returns, they rise. When the authorities have the power to create money the most likely scenario is that they will succeed in producing inflation. As Damon Runyon once said, ‘the race is not always to the swift nor the battle to the strong but that’s the way to bet.’ The aim of Washington in its reaction to Lehman Brothers’ bankruptcy and subsequent events is to instil confidence in the US banking system and create credit growth and inflation. In a system where central banks can create money and banks can be directly or indirectly recapitalised with government money, the US government is very likely to achieve its goal.

Of course, given these actions, one would expect a market counter-reaction. Having an official institution printing money to purchase low-quality assets should be negative for the greenback, with the increase in supply undermining the value of the currency on international exchanges. However, no such market discipline has been meted out to the US as other countries are also boosting the supply of their currencies and the dollar’s reserve-currency status continues to attract capital flows. The increase in the money supply, combined with massive Treasury issuances, should undermine the price of Treasuries, but Federal Reserve buying is negating any such
market force. How long it takes for these markets to bring discipline to US financial markets will determine how long the bear rally will last. With true discipline for the US authorities likely to be some years away, the odds are that Washington will succeed in removing the deflationary risk that is depressing equity prices.

A rise in inflation from low levels can be very positive for equities, as it was from 2002 to 2007. However, eventually, its impact on US Treasuries is likely to be so negative as to produce the final downleg in the great 2000-14 equity bear market. The cyclical risk for Treasuries is obvious as fiscal pump priming results in huge bond issuance and as the spectre of rising inflation in the next business cycle increases. These cyclical factors are not the key drivers that will destroy the purchasing power of US Treasuries though. The real danger is in structural changes – rising consumption in China and increasing retirement in the US – that will probably bring market discipline to the US authorities for the first time since the 1970s. These factors are what will now inflict most damage on US financial markets.

Strange as it may seem, 2008 will not go down in history as the year of the financial crisis but rather as a time when something much more important happened. It was in 2008 that 40% of the world’s population realised that it could not continue to get richer by selling to 14% of the world’s population (Europe and the USA). Since the end of communism, the governments of 40% of the world’s population (China, India and the former Eastern bloc countries) have been depressing their exchange rates to boost their exports to the US and Europe. The resultant flood of capital into these jurisdictions, but particularly into the US, depressed interest rates and fuelled the credit binge that financed the purchase of goods and led to higher asset prices. In 2008, it became clear that we had reached, or were close to, the limit of debt that 14% of the world could sustain to maintain current levels of consumption.

Governments beyond the US and Europe must now look for other ways to grow. While it will take some time to engineer the solution, a move away from export-orientated growth to domestic-consumption-driven growth has been instigated. As this form of growth becomes more dominant, the need to depress exchange rates by buying dollars and US Treasuries will come to an end. This withdrawal of foreign support will be the catalyst for a significant hike in the US Treasuries yield which, after little initial impact, will bring down the price of equities. The unwinding of the truly massive distortion of US Treasury prices will impact global financial markets for several decades.
The really bad news is that the US Treasury market not only faces a structural demand problem but also a structural supply problem in the form of financing the retirement of the baby-boomer generation. Reasonable estimates suggest that the government will have to find around US$50 trillion over the next two decades to cover social security and Medicare payments. The US cannot afford such entitlements. Part of the solution is to cut back these handouts, either through raising the retirement age or turning down wealthier applicants. However, the political process is not designed to withdraw benefits from electors and Treasury issuance is likely to be one of the, seemingly, easier ways to deal with the problem. The first baby boomer to become eligible for a social security retirement pension received her first cheque on 12 February 2008. This is no longer a theoretical problem and the implications for the Treasury market are dire.

As I said in 2005, this bear market will not be over until equities trade at a 70% discount to the replacement value of their assets. That return to record-low valuations would see the S&P500 around 400, a decline of close to 70% from the November 2005 level and within the 60-80% range projected in the first edition of this book. As forecast in 2005, the long bear market in US equities is unlikely to be truly over until we have a bear market in US Treasuries. So investors have to beware. The initial rise in Treasury yields will be greeted as a sign of ‘normalisation’ in the US as it was from 2003-07. However, as yields return to 2007 levels and the structural deterioration of the market continues, a terrible realisation will dawn.

Washington has extended the US credit supercycle by transforming a great deal of US commercial risk into sovereign risk. While this will initially seem acceptable, the cycle will end when the world realises that the US government is a terrible credit risk because of the huge amount of debt it is trying to support. The US commercial system almost went bust in 2008-09 but the price of saving it will be the growing realisation, sometime before 2014, that the government is de facto bust. This is the most likely catalyst to reduce equities to a 70% discount to the replacement value of their assets. It will be then that you should re-read this book, as great fortunes will be made by investing in very cheap US equities. Until then you should be wary of equities, unless you feel comfortable investing in bear market rallies, and you should be terrified of Treasuries.

Russell Napier
April 2009
Introduction

Before beginning a Hunt, it is wise to ask someone what you are looking for before you begin looking for it.

Pooh’s Little Instruction Book by Joan Powers, inspired by A. A. Milne.

As a fly fisherman, I have occasionally found myself deep in the woods of North America. This is where the bears live. As an Ulsterman, my experience has not been in dodging bears and I have sought the advice of the experts on what to do should one appear on the river bank. The US National Parks Service has been particularly helpful.

Make as much noise as possible to scare it away. Yell. Bang pots together. If there’s someone with you, stand together to present a more intimidating figure. All of this might prevent your name joining the list of 56 people so far killed in bear attacks in North America over the past two decades.

This book is about what to do should you spot a bear of a different kind, but one no less dangerous. It is a field guide for the financial bear, which can shred a portfolio and seriously damage your wealth. And this type of bear is a much greater threat to most individuals than anything found in the wild.

There are some 84 million shareholders of US equities alone¹, and millions upon millions more around the globe, whose financial futures could be destroyed or seriously damaged by one of these bears, which are not nearly as easy to recognise as a member of the ursidae family in the woods of North America.

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¹ New York Stock Exchange Factbook.
America. Even if you can recognise this bear, making a lot of noise or standing tough with friends won’t scare it away, though you may feel a lot better.

This is a good time to look at the financial bear. The large decline in the price of US equities that erupted in March 2000 petered out in late 2002. Was this the end of the bear market? Informed commentators are divided on the issue, even by the autumn of 2005 when equity prices remain well above their lows. Did a new bull market begin in 2002, or is it just a bounce in a longer bear market? There are few more important questions to be answered in modern finance and this book, by looking at all the previous major bear markets that have followed on from periods of extreme overvaluation, offers an answer to that question. We remain in a bear market. When will it end? How much lower will the market have to go? What events will help you determine when the market has bottomed? The answers are in this book.

As with everything in life - except, perhaps, water in your waders in the middle of a particularly cold stream - there is an upside to a bear market. According to Professor Jeremy Siegel’s analysis of total real returns since 1802, all an investor needs do is hold for 17 years, and they will never lose money in the stock market. If you sit it out and ignore market prices, history suggests that in sometime less than 17 years the bear will simply go away, leaving your real purchasing power undamaged. When it comes to investment in equities, it is indeed true that everything comes to he who waits. If you have that time horizon, you don’t need a financial field guide.

Few investors are sanguine enough to ignore market movements for 17 years. Indeed, New York Stock Exchange (NYSE) statistics for the first half of 2005 show the average holding period of the 84 million stockowners in the US was just 12 months (the average holding period from 1900-2002 was just 18 months). In the 20th Century, the real annual return on US equities was negative for 35 of those 100 years. In eight of those years, the negative return exceeded 20%. So, the average investor will likely encounter a bear market every three years or so, and every 13 years the bear will be particularly mean.

Granted that much of the volume on the NYSE is created by hedge fund managers and operators with near 20/20 short-term foresight, let’s assume the average investor is more patient than the statistics suggest and works on a time horizon of ten years. This, of course, is wishful thinking as NYSE average turnover rates show only one year in the past hundred where the average investor had a time horizon of this duration. However if we assume a ten-year holding period, that still makes a bear encounter somewhat likely. For nine of the years of the past century, subsequent ten-year total real
returns from US equities were negative. This is frequent enough, even for an investor with a ten-year time horizon, to face the risk of committing capital in the one dud year in 11. And big bears tend to linger. Periods of rising prices, before a further fall, are not uncommon in long bear markets. A financial field guide helps to avoid mistaking a rise in prices for the onset of a new bull market.

As you will discover, it seems highly likely that the rise in US equity prices since October 2002 has been just such a false dawn. That’s important information, even if you have a ten-year time horizon.

Bears, however, can be beautiful in their way, and an alternative title for this book might have been How I Learned to Stop Worrying and Love the Bear. Bear markets mean lower prices. Consumers don’t object to lower prices and neither should investors if they are buying rather than selling. Avoiding bears preserves wealth, but buying cheap in a bear market, given the positive real long-term returns from equities, is even more profitable. This field guide to the financial bear focuses on the very lucrative periods in history when equity prices had been pushed well below fair value and rebound was imminent.

As US baseball legend Yogi Berra once said, ‘You can observe a lot just by watching’. By watching the financial bears, we can observe the point at which a number of potential factors come together to signal the market can only get better. Those factors include low valuations, improved earnings, improving liquidity, falling bond yields, and changes in how the market is perceived by those who play it. The aim of this guide is to help recognise factors that have, in the past, proven to be good markers to the future, and those that have been misleading. Albert Einstein once said the secret of his success was to ask the right questions, and keep going until he got the answer. In financial markets just asking the right questions can be incredibly difficult. This book, by studying financial history, offers the questions to ask when confronted by the bear. You have an advantage over Einstein. The beauty of finance over physics is that you don’t need to provide the right answers, just better answers than most everyone else. Hopefully, this guide will help you on the way to finding those better answers.

Using financial history as a tool to understand the anatomy of the bear market is contentious, and Henry Ford was right in a way to say that ‘history is more or less bunk’. Ford was talking about “tradition”, a form of extrapolation that is inherently dangerous for any investor. A man of capital trapped in a mindset of behaving the same way as his forebears would probably still be clutching an equity portfolio rigid with the scrip of the Anglo-American Brush Light Company (the patent holder of the arc-light
made redundant by the work of Edison) and The Locomobile Company (its steam car lost its one-third share of the US automobile market).

Unfortunately, Ford's aphorism became imbedded in the academic approach to financial markets in 1952 when Harry M. Markowitz published his paper ‘Portfolio Selection’. This paper began an assault by academia on the value of history to investors. Markowitz assumed markets were efficient, and he came to some clear conclusions about the benefits of building a diversified portfolio of stocks. This dalliance of science with the concept of efficiency in relation to financial markets soon became a courtship and marriage in the form of the “efficient market hypothesis”.

The birth of this theory was, for many, proof that history was indeed “bunk”. What value, they asked, can there be in studying the history of financial markets if the stock market efficiently and immediately reflected all available information? Wasn’t history simply an accumulation of all available past information? By the 1970s, the belief that market prices already reflect all available information had gained Wall Street’s endorsement. As Peter Bernstein puts it:

Had it not been for the crash of 1974, few financial practitioners would have paid attention to the ideas that had been stirring in ivory towers for some twenty years. But when it turned out that improvised strategies to beat the market served only to jeopardize their clients’ interests, practitioners realized that they had to change their ways. Reluctantly they began to show interest in converting the abstract ideas of the academics into methods to control risk and to staunch the losses their clients were suffering. This was the motivating force of the revolution that shaped the new Wall Street.

The new Wall Street came to replace the old. The acolytes of efficiency created a shrine to mathematical modelling of risk and return, all based on the assumption of efficiency. As is the wont of all new sects, iconoclasts damned the methodology of their predecessors as barbaric. However, even as this new sect became the orthodoxy, there were incidents that struck at its core beliefs. In 1987, the new Wall Street created a derivative product that offered investors a type of portfolio insurance. It failed to deliver, exacerbating the stock market crash of that year.

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2 *Journal of Finance* Vol. III, No. 1 (March)
3 Peter Bernstein, *Capital Ideas: The Improbable Origins of Modern Wall Street*
The new Wall Street may have created products for the management of risk, but it could not eradicate the risk of human greed and stupidity, as the citizens of California’s Orange County and the shareholders of Gibson Greetings discovered.\textsuperscript{4} In 1998, the acolytes closest to the shrine felt the tremors as Long Term Capital Management, perhaps the ultimate creation of the new Wall Street, imploded. Picking through the wreckage, there was evidence in the boom and bust of 1995 to 2002 that the new Wall Street was no more successful in protecting clients’ interests than the failed “improvised strategies” of 1974.

Whatever the truths inherent in the ascendant orthodoxy, was it really so wise to discard the lessons of those who had gone before? The events of 1995 to 2002 indicate that some synthesis of old Wall Street thinking and new Wall Street ideas could create a more relevant and useful approach for financial practitioners. And that brings us back to the value of financial history.

The recent expansion and busting of yet another stock market bubble may be a good enough reason to suggest there is more in heaven and earth than is dreamed of in the philosophy of efficiency. There is also another reason. In 2002, the behavioural psychologist Daniel Kahneman, along with Vernon I. Smith, was awarded the Nobel Prize in economics for ‘having integrated insights from psychological research into economic science, especially concerning human judgement and decision-making under uncertainty’.\textsuperscript{5}

The Nobel Committee believed Kahneman had elucidated some of the errors in human judgement that eradicate the surety of efficiency. Ironically, Kahneman’s first published article on the concept appeared in 1974, just as Wall Street was coming to embrace market efficiency. The Nobel Committee had previously honoured the acolytes of efficiency - Harry Markowitz, Merton Miller and William Sharpe in 1990, and Myron Scholes and Robert Merton in 1997. It now recognises a psychologist who questions whether human judgement, even in aggregate, lends itself to efficiency.

If there is a legitimate role for the study of human judgement and decision-making under uncertainty, then financial history is redeemed. What is financial history if not such a study? The behaviouralist school of

\textsuperscript{4} Both sets of investors wound up nursing huge financial loses, having misunderstood the financial risks inherent in derivative products.

\textsuperscript{5} Press release from Royal Swedish Academy of Sciences, 9 October 2002
psychology, around for nearly a century, is based on observing reactions to selected stimuli. Financial history looks at market prices, which are a reflection of the behaviour of thousands of participants to certain stimuli. In behavioural economics, history is a useful tool for observing how financial markets work, rather than theorising about how they should work.

Such historical studies have not yet lent themselves to the comforts of empiricism. This, in itself, may be enough of a reason for many to reject the approach. However, the inability to translate all understanding into binary code does not necessarily denude it of value and insight. If psychology is a soft science, then using financial history to assess human decision-making in times of uncertainty is softer still. For those who accept that human judgement and decision-making cannot be divined by equations, financial market history is a guide to understanding the future.

The particular value in financial market history comes from its insight into the operation of human judgement under uncertainty, in particular its examination of contemporaneous opinion. While any historian is liable to hindsight bias, a focus on contemporary comments and reactions at least reduces the risks of projecting one’s own order on things. As a historical source, newspapers offer an efficient daily collation of events and, in the financial press, with a focus on the markets, this has been the best practical repository of contemporaneous opinion for the past century or more. The boom in press coverage of the stock market dates from around the birth of the railway, when the emerging middle classes found investing in the new technology almost irresistible. If we focus on this particularly rich vein of information, we find a largely reliable source that dates back to around 1850.

To discover what the bottom of past bear markets looked like, and how the investor was reacting, I analysed some 70,000 articles from The Wall Street Journal written in the two months either side of the four great bear market bottoms. I report my findings in these pages. My aim is to provide as accurate a picture as possible of a bear-market bottom based on contemporary comment. This is where any understanding of human decision-making in times of past investment uncertainty must begin. The pages of the WSJ take us close to the primary sources on what was happening at the time and, at various points in the book, the reader will be immersed in this contemporary coverage of events and the approaches that have worked in assessing when the bear is about to become the bull. What also emerges is an understanding of how similar the great four bear-market bottoms were, in turn leading us to a set of signals to guide investment strategy.
In this book, I focus on the history of bear markets. Such periods have important practical implications for today’s investor, but seem to be the chapter missing from most books on financial history. Booms and bust make for attractive analyses, but what of the moment the bust ends and the boom begins. Picking that point must surely minimise losses and optimise profit. But which of the many bear markets in the many financial jurisdictions occurring since 1850 will lead us to the right conclusions? Looking for the best available financial market coverage and the largest financial market, we are drawn to the United States, rather than the United Kingdom. So, which of the US bear markets will tell the most complete story? Those bear market bottoms that were followed by the best subsequent returns have the advantage of at least suggesting practical ramifications from the exercise. Whatever subjectivity there may be in discussing whether markets are below fair value, the subsequent superior returns from these lows are the best objective indicator that value did exist.

Andrew Smithers and Stephen Wright published a book in 2000 called Valuing Wall Street, in which the authors calculate the best years in the 20th Century to have invested in equities. They defined a measure of “hindsight value”, calculated by taking the average of 40 discrete periods of subsequent returns over one-to-40 years. By taking the average of returns over 40 different holding periods, “hindsight value” would represent the range of holding periods of the very differing investors who have bought equities in any given year. This study showed the best three years to buy US equities were 1920, 1932 and 1948. These years do not necessarily coincide with the period when the Dow Jones Industrial Index (DJIA) reached its low. This difference is mainly because the return calculations are done using year-end levels, and the equity market has a habit of not necessarily being at its low on 31 December. When adjustment is made for intra-year movement, the three best times to invest in US equities emerge as August 1921, July 1932 and June 1949.

“Hindsight value” can only be calculated for those years where there is at least a subsequent 40 years of returns. Subjectivity does play a part in leading us to the fourth period for analysis in this book, but there are good reasons to believe 1982 will prove to be one of the four best years to have invested in US equities. It is certainly in the top four, 23 years down the track.

As equities produced the best returns after these four periods, we can state with the benefit of hindsight that equities were at their cheapest in 1921, 1932, 1949 and 1982. This is a measure of value only observable some 40
years after the event and, thus, of limited immediate use. For the purposes of this book, we need a reliable measure of value available to investors facing the market on a day-to-day basis. There are many competing valuation metrics, but fortunately Andrew Smithers and Stephen Wright narrowed the field to just two. In *Valuing Wall Street*, they subject the most common valuation measures to various tests, importantly the reliability of those measures relative to subsequent returns as indicated by “hindsight value”. What we find is there were measures of value available to investors at the time that showed equities to be very cheap in 1921, 1932, 1949 and 1982. While accepting the usefulness of the cyclically adjusted PE - the chosen measure of value of Yale’s Robert Shiller - Smithers and Wright found that the q ratio has been a particularly accurate indicator of superior future returns. Given its usefulness, at least over the long term, we will use the q ratio to assess how equity valuations have altered over different periods.

The q ratio is effectively a measure of the stock-market valuation of a company relative to the replacement value of its assets. In this book, a statement such as ‘equities were trading below fair value’ simply means the prevailing q ratio was below the geometric mean of the ratio. The four periods we study in this book are the only occasions when equities were at more than a 70% discount to replacement value. The role of this book is to explain the forces that reduced prices to such levels, and identify the factors pushing them back to replacement value and beyond.

To tell the story of the four-month period around the four great bear market bottoms, we cannot ignore the bigger picture. To understand the forces pushing equity prices back towards fair value, one must understand the fears that drove them to such discounts to fair value. That excursion, often through decades of investment history, is a book in itself and much has had to be omitted in the interest of brevity. In Part I, the backstory can be found under the heading ‘The road to August 1921’ - a similar heading is used to set up the subsequent three periods under discussion. It is also necessary to provide a brief description of the structure of the financial markets in each of the periods studied. There are important structural differences in each period that need to be borne in mind by investors seeking to apply the lessons of history to today’s markets. For example, major financial institutions were not listed on the NYSE in the first of the periods we examine. A brief overview can be found under the heading ‘Structure of the markets’. Having sketched the cause of the market decline and its contemporary structure, we then focus on the factors signalling the end of the bear market, under the heading ‘At the bottom with the bear’. Examination
of the behaviour of the fixed-interest markets - a book in itself - focuses on the salient events directly affecting equity prices.

Readers will also notice that extended attention is paid to the events of 1929-32. This is because there are important differences between this great bear market and the other three analysed in this book. It is also because 1929-32 is often held up as being typical of a bear market; and events of that period often colour opinions about what a bear market looks like. It is therefore useful to spend some time with this bear, if only to understand more about how unique it was in financial history.

This book is aimed at both the professional investor and those wanting to exercise their own judgement in making the best financial provisions for their future. Throughout the book are boxes to help the lay investor seeking to understand the complexities that professionals sometimes neglect to explain. Still, there is likely to be jargon that has gone unexplained. A useful aid in understanding this jargon is the excellent online encyclopaedia at the Economic History Services website at www.eh.net.

Sections of text have been bolded to guide the reader with conclusions that may be drawn from events as they are discussed, building towards a set of universal conclusions about bear-market bottoms, their identification and strategies to optimise profit.

Throughout this book are epigraphs from some of the 20th Century’s greatest writers. They were living amid enormous economic turbulence and financial uncertainty and their work around the time of our analysis allows us to hold the mirror of literature to the events we examine. The central characters in these novels made propitious financial decisions just as the stock market was reaching its bottom. F. Scott Fitzgerald had Nick Carraway give up his job on Wall Street in 1922, following Gatsby’s death, and return to Wisconsin. Whether he was happy there we shall never know but he headed east just as the greatest equity bull market in US history began. For James T. Farrell, poor Studs Lonigan had an even worse fate. He flung his nest egg into the market in 1931, just as the worst portion of the financial collapse began. Before the equity market bottomed in July 1932, Studs was dead. In the late 1940s, Robert Holton had to decide whether to take a risk and head off to Italy with a married woman, or to play it safe and stay on Wall Street. Gore Vidal decided Holton should stay behind - and outside the pages he would no doubt have benefited handsomely from one of the longest bull markets in the history of America. This is not to say he wouldn’t rather have been in Italy. Holton appears to have been the only one of these characters to have made a financially astute decision. For John Updike’s
Harry ‘Rabbit’ Angstrom, gold, in the form of krugerrands, was the best investment for his future. His fateful purchase almost coincided with gold’s all-time high.

Can it be coincidence that the four years covered in this book - 1921, 1932, 1949, 1982 - also mark momentous change in American society. There was the birth of the consumer society (1921), the birth of big government (1932), the birth of the military-industrial complex (1949) and the rebirth of free markets (1982). Each of the fictional characters in this book struggles with a particular societal transition, all the while wrestling with the impact of that change on their financial future.

I had lunch with a man who has come across quite a few bears in his time, polar explorer and mountaineer David Hempleman-Adams. I asked him what to do when confronted with a bear and his advice was brief: ‘Shoot the bastard.’ Guns offer no protection from the financial bear. This book, I hope, makes it a fairer fight.
Part I

August 1921

‘I wouldn’t ask too much of her,’ I ventured. ‘You can’t repeat the past.’
‘Can’t repeat the past?’ he cried incredulously. ‘Why of course you can!’

F Scott Fitzgerald, The Great Gatsby

Despite the boom in US stock markets during the early years of WWI, by August 1921 the Dow Jones & Co. Index of Industrial shares was back to its level of 22 years ago. Investors who had shunned this dangerous new sector of the market had fared even worse with their blue chip railroad shares back at 1881 prices. But now was a wonderful time to buy, with equities trading at a 70% discount to the replacement value of their assets. By September 1929, equities were close to a 100% premium to their replacement value and the DJIA had risen almost fivefold. This was the greatest bull market in the almost 140-year history of the New York Stock Exchange. What changed in 1921, and how could investors have anticipated the bottom of the market to profit from the Roaring Twenties?
The road to August 1921

The course of the Dow - 1896–1921

It was the end of summer in lower Manhattan when the air was ripped asunder by a thunderous explosion outside the offices of JP Morgan & Co on Wall Street. The area went dark and a huge cloud of smoke swathed the financial centre of America. Brokers at the New York Stock Exchange ran to avoid the flying glass. Windows shattered up to half a mile away. The death toll would reach 40 and the date was 16 September 1920. It has never been determined who planted the bomb. The press and public used one of Wall Street’s favourite analytical tools in assessing the situation: extrapolation. In April 1920, bombs had been mailed to 18 prominent people known in their politics to be anti-labour. It was assumed the Wall Street bomb was also a “red” attack, this time on the centre of US, and increasingly world, capitalism. The bomb was not the only disturbance on Wall Street - a vicious bear market was also wreaking havoc.

Bear markets are the field of study of this book. This is not due to any predilection of the author to chronicle the more depressing periods of our investment history, quite the reverse. Buying at the bottom is the goal, perhaps only a dream, of every investor. This book is thus an identification guide to those seeking to establish that period when the bear turns into the bull. This is the most profitable time to invest in equities, and the summer of 1921 was probably the most profitable time in the history of Wall Street. To create such an identification guide it is important to, paraphrasing the estimable Mrs Beeton, ‘first catch your bear’, but defining a bear market is not easy, even today, with the S&P 500 and the Dow Jones Industrial Average (DJIA) sometimes telling quite different stories. In 1921, it was far more complicated as there was no index representative of the whole market. To gauge market movements, one had to watch two distinct sectors: the Dow, Jones & Co 20 Industrial Stock Average, and the Dow, Jones & Co 20 Railroad Stock Average.

The development of the two separate stock indices by Charles Dow tells the story of the development of the stock market itself as it headed down the road to the bear market of 1919-21. In 1896, industrial share sales accounted for 48% of volume on the NYSE, compared with 52% of volume for the railroad stocks. There was an extremely low level of market activity in general - reflected in a 41% decline in the price of NYSE memberships
over the previous decade - and in railroad shares in particular, as the market recovered from the panic of 1893-95.

JP Morgan’s amalgamation of bankrupt and distressed railroads in the wake of the crisis of 1893-95 panic breathed new life into that moribund sector. Merger mania followed soon after the launch of the industrials index, and the number of business mergers in the United States rose from 69 in 1897 to more than 1,200 in 1899. The positive impact from such mergers was greatest for the railroad sector, where profitability had been crushed by excess capacity. A merger-driven bull market in railroad shares drove up the railroad index from 1896 to 1902, far surpassing the rise in the industrials index, where excess capacity had not previously been as damaging to profitability. Dow’s creation of an industrial average in 1896 marked the high-point of interest in the industrial stocks and their share of total market turnover did not rise above the 1896 level again until 1911.

The Dow Jones Industrial Average (DJIA) was first published in May 1896 and was calculated by averaging the share prices of 12 component companies. Charles Dow created his original index in 1884, at which time it was dominated by railroad shares. The need for a second index for industrials was evident by 1896, indicating the growing importance to investors of the “smokestack” companies. In October 1916, the number of stocks in the index was expanded to 20, and in October 1928 to the current 30. The index continues to be weighted by price rather than market capitalisation. References throughout this book to “the market” refer to the DJIA. Throughout the four periods covered, investors looked to the DJIA as their guide to what the market was doing. In analysing the investor’s perception of the market, we also focus on the DJIA. Sometimes it is necessary to refer to another index, the S&P Composite Index, but such divergence is confined to valuation and earnings, where the data is of superior quality to that available for the DJIA.

The highpoint for activity in railroad stocks ended with the assassination of William McKinley in 1901 and the ascendancy of Theodore Roosevelt. The new president was less sympathetic to the numerous combines of businesses formed as legal trusts and acted to control pricing in many industries. The trust-busting activities of the new administration hit the mature railroad business with greater ferocity than the growing industrial sector. By 1911, the industrial sector...
sector’s share of total turnover breached the 1896 level and, for the first time, exceeded activity in railroad stocks. Activity and interest in both asset classes were then roughly equal until the start of World War I, when a dramatic divergence in activity and prices developed.

Figure 1

RAILROAD/INDUSTRIALS MARKET SHARE (%) 1895-1921

![Graph showing铁路和工业股票市场份额（%）](image)

Source: New York Stock Exchange

Investors seeking to survive and profit in the 1919-21 bear market were dealing with a market which had been structurally transformed by WWI. By the end of the war, industrials accounted for more than 80% of NYSE volume and most of the railroads had been nationalised. The war also produced a disturbance to the general price level, which was to lead directly to the bear market of 1919-21. Market reaction to the assassination of Archduke Franz Ferdinand on 28 June 1914 had been relatively calm. However, on 25 July, Austria and Germany refused to attend a conference of the six Great Powers (Russia, Great Britain, France, Austria-Hungary, Italy and Germany). The apparent inevitability of an outright war heightened the prospects for a mass selling of stocks. Investors feared a heavy outflow of gold from the US, a debtor nation, to finance a European war and an ensuing tightening of domestic liquidity. On 28 July, Austria declared war on Serbia, and the stock exchanges of Montreal, Toronto, and Madrid closed, followed the next day by Vienna, Budapest, Brussels, Antwerp, Rome and Berlin. On 31 July, the London exchange closed and the NYSE was left with little choice but to follow suit rather than be faced with the prospect of having to absorb huge forces of liquidation from global investors. The DJIA stood at 71.42 and the railroad average at 89.41.
With certain restrictions on trading, the market reopened on 12 December 1914, a Saturday. On the Monday, the Wall Street Journal published the first Dow Jones averages for more than four months. The railroad average had risen to 90.21. The industrials average, however, ended 12 December at 54, down 32% from the 30 July level. The industrials average bottomed just below that level within days before a major bull market that lasted through 1915. Instead of the feared capital outflow, funds poured into the US as the warring nations bought necessary materials from the neutral industrial powerhouse.

![Dow Jones Industrial Average - Inception to 1921 Bear Market Bottom](source: Dow Jones & Co.)

As well as improving liquidity, industrial stock prices benefited from booming profits. It is important to stress the incredible magnitude of the profit boom in that period. In nominal terms profits did not exceed the 1916 level until 1949. In real terms, it was not until December 1955 that 1916 earnings were exceeded, and thereafter there were numerous subsequent declines to pre-1916 levels. As late as January 1992, S&P Composite real earnings were below the 1916 level. Indeed, when real earnings bottomed in March 2002, they were just 4.7% above the 1916 level. Not surprisingly in this environment investors quickly came to favour industrial stocks referred to as “war brides” - those accruing huge war orders from Europe. Following this major bull market, railroad and industrial stocks traded largely sideways through 1916, before a major downturn in prices in 1917 on the growing likelihood of the US entering the war and an early peace. Further contributing to the 1917 bear market was government intervention to
control commodity prices, the failure of the railroads to secure rate increases from the Interstate Commerce Commission (ICC), rising costs, the introduction of an excess profits tax and increased government debt issues.

As the stalemate war in Europe turned to attrition, the industrial and railroad indexes traded sideways through 1918. It was not until after the war, in 1919, that the industrials enjoyed another bull market, reaching an all-time high in November 1919. The vast discrepancy in performance of the two sectors during and immediately after WWI resulted from many factors, but the nationalisation of the railroads at noon on 28 December 1917 was clearly a key factor. This effectively converted railroad equity into bonds, with the government paying the stock owners a fixed dividend based on the average earnings of their companies prior to nationalisation.

With returns to railroad stockholders thus constrained, investor focus shifted to industrial stocks, where companies were benefiting from the wartime boom. When the industrials' bull market peaked in 1919, turnover in railroad shares accounted for just 13.8% of the total trading volume. But investors in stocks continued to focus on both indexes through 1919-21. Many investors believed the decline in railroad stocks was a temporary phenomenon that would disappear with the end of nationalisation in March 1920. By 1921, investors were still looking to the railroad and industrial indices in assessing the scale of the bear market, even though volume in the industrials sector now far surpassed activity in the railroads.

**Living with the Fed - A whole new ball game (I)**

It would be easy, and dangerous, to assume that markets worked in 1921 as they do today. Before looking at the stock market in detail for the period of June to October - two months either side of the August bottom - it is worth pausing to consider key institutional differences in the workings of the financial markets then against now. In particular, in setting the scene for the events of late summer 1921, it is important to consider the emergence of an unknown new factor in markets - the Federal Reserve System, established in 1914.

This system consisted of the Federal Reserve Board and 12 Federal Reserve Banks. The Reserve Banks were free to determine discount rates but, according to the legislation, such decisions were 'subject to review and determination of the Federal Reserve Board'. However, no such review and determination was given to the Federal Reserve Board when it came to the open market operations of the Federal Reserve Banks. There was, thus, the possibility of a high degree of autonomy for the Federal Reserve Banks within
the system. This autonomy led, in the early years of the system, to the Federal Reserve Bank of New York, operating as it did in the financial capital of America, becoming a key driver of the system’s monetary policy.

The decentralised structure of the system complicated the business of forecasting future policy and also led to conflicts within the system itself, which were to have important consequences in the not too distant future. The dramatic impact of the creation of this institution at the time might be understood by the modern investor if one imagined the impact on investment decisions if the system was abolished tomorrow.

The creation of a central bank altered the operation of a monetary mechanism that had been familiar to US investors since the post-Civil War resumption of the gold standard in 1879. The Federal Reserve System created an element of uncertainty for investors. It was difficult to know how this extra, human element would work. Indeed, there had been a long-held belief, summed up by the report of the Bullion Committee to the British House of Commons in 1810, that the introduction of any human element in the monetary process could be dangerous.

The most detailed knowledge of the actual trade of the country, combined with the profound Science in all the principles of Money and circulation, would not enable any man or set of men to adjust, and keep always adjusted, the right proportion of circulating medium in a country to the wants of trade.6

The US did not have an official central bank - President Andrew Jackson vetoed the renewal of the charter of the Second Bank of the United States in 1832.

Just how the new system would interact with the gold standard to influence liquidity, interest rates and financial markets was difficult to predict, given its mandate:

To provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes.7

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6 Report from the select committee of the House of Commons on the high price of gold bullion (1810).
7 Preamble to the Federal Reserve Act 1913
Such a step was believed necessary because, twice in the recent past, the inability to ‘furnish an elastic currency’ had brought the United States close to bankruptcy. In February 1895, only a loan from JP Morgan and the Rothschilds had prevented the exhaustion of the US government gold reserve and the end of the gold standard. In 1907, JP Morgan again brokered a deal to prevent the bankruptcy of key financial institutions and saved the financial system. Despite significant political opposition, Wilson’s Democrats enacted the legislation that created the Federal Reserve System and the “elastic currency” that was supposed to remove from private hands the role of de facto lender of last resort.

The **gold standard** was a monetary system, under which gold coin was legal tender and bank notes could be redeemed for gold at a fixed price. Many countries adopted this monetary system, each declaring a fixed price in gold for their domestic currency. As each national currency was redeemable for a fixed amount of gold, the value of each currency was effectively fixed relative to each other. This had important implications for the supply of money in the economy, and economic activity and prices. If the US, for instance, ran a balance of payments surplus, there would be more buyers than sellers of US dollars. In that situation, more dollars would have to be created to retain the fixed rate of exchange. A sufficiently large increase in the amount of dollars would likely produce higher economic activity, but also higher prices. Higher prices would eventually erode US competitiveness and the balance of payments would eventually move into deficit. In a situation where there were more sellers than buyers of the currency, the process would be reversed. After WWI a variation of the gold standard was introduced in which some authorities would hold other currencies, which themselves were redeemable for gold, as part of their reserves. This system was known as the gold exchange standard.

In practice, the Federal Reserve System furnished elasticity by creating Federal Reserve banknotes and accepting commercial bank deposits with the Fed as satisfying legal reserve requirements. The Fed created these two types of money by receipt of gold, rediscounting of eligible paper, discounting of foreign trade acceptances, and open market purchases of government securities, banker’s acceptances and bills of exchange. This ability to create money based on rediscounting bank assets was known as the real bills criterion. The difficult
question for investors to answer was how such an elastic currency would operate while the country also adhered to the gold standard? The apparent conflict is that the gold standard dictates the stock of money necessary to balance international payments while the real bills doctrine does not limit the quantity of money. Milton Friedman and Anna Jacobson Schwarz argued that this contradiction was ‘more apparent than real’.

While the gold standard determines the longer-term movements in the total stock of money, it leaves much leeway in shorter-run movements. Gold reserves and the international capital market provide cushions for temporary imbalances. More important, the gold standard does not determine the division of the total stock of money between currency and deposits, whereas the real bills criterion was linked to this division.\(^8\)

The crises of 1895 and 1907 were exacerbated by the public’s shift from bank deposits to cash. Thus, the new legislation was aimed at creating a system that would allow such a shift to occur without producing bank failures or the restriction of cash payments by banks. The elastic currency could be rapidly expanded in such situations and banks could rapidly access currency by discounting their assets with the new reserve bank.

In theory, an investor should expect that the Fed would operate only to alleviate any rush to currency that would imperil the banking system. The problem for those allocating capital was that, in practice, something very different occurred. From the creation of the Federal Reserve System in November 1914 to June 1920 the “elastic” money was stretched and the stock of money more than doubled. To complicate matters further for investors, the Fed’s role in money-creation was inconsistent and unpredictable.

\[\text{Figure 3}\]

\begin{center}
\begin{tabular}{lccc}
 & US neutrality & War & Peace \\
 & Jun 1914 –Mar 1917 & Mar 1917 –Nov 1918 & Nov 1918 –May 1920 \\
Monetary gold stock & 0.87 & 0.04 & (0.41) \\
Federal Reserve claims on public and banks & .015 & 1.24 & 1.44 \\
Other physical assets and fiat of monetary authorities & (0.02) & (0.28) & 0.03 \\
\end{tabular}
\end{center}

Source: Friedman And Schwartz

\[\text{\textsuperscript{8}Milton Friedman and Anna Jacobson Schwartz, A Monetary History of the United States, 1867–1960}\]
**High-powered money** (also known as the monetary base) is a term for a combination of all the forms of money, over which the Federal Reserve has almost complete control. It is known as high-powered money because small changes produce much larger impacts on the total amount of money in the economy. By impacting the total amount of money in the economy, changes in high-powered money can have major impacts on economic activity and inflation. Prior to the creation of the Federal Reserve System the key determinant of change to high-powered money had been gold inflows and outflows under the operation of the gold standard. This mechanism continued to impact the growth of high-powered money after the creation of the Fed, but the Fed could also act independently to influence high-powered money. Over the years, equity investors have watched the performance of high-powered money as a leading indicator of future trends in the economy, inflation and the stock market.

As we can see from Figure 3, the Federal Reserve System played only a minor role in money-creation prior to US entry into the war. The initial surge in the growth of high-powered money was due to a major gold inflow as belligerent governments purchased goods, liquidated investments and borrowed money. This process produced a turnaround in the US international investment position. A deficit of $3.7 billion in 1914 became a surplus of similar size by 1919. At this stage in its history, the Fed could only rediscount selected commercial bank assets to create Federal Reserve money. It had accumulated few assets, so had none to sell to “sterilise” an increase in high-powered money caused by the accumulation of gold. In more simple terms, the Fed could stretch the elastic currency in its early years but, until it had been first stretched, it could not be an instrument for monetary tightening. For the investor, the Fed System had little impact on liquidity adjustment and its consequent influence on stock market prices from the system’s creation until the US entered the war in 1917.

US entry into the war created a clear monetary shift. The country now sold goods to its allies on US government credit rather than in return for gold. The flow of gold to the US ceased. In this period the increase in the monetary gold stock now played a negligible role in the increase in high-powered money. A second monetary change due to the US entry into the war was the government’s need to finance the military. Although taxes rose, revenue was insufficient. Money creation through the central bank now
played a role in enabling the government to raise finance domestically. Investors now had to understand the role of the elastic currency in propping up government finances rather than preventing the liquidity crises for which it had been designed. How “elastic” would be the new currency in this situation and, assuming the US won the war, what would be the magnitude of its subsequent contraction? Investors who answered these two questions correctly would make the optimal investment decisions of 1917-21.

Entry into the war produced a dramatic stretch in the elastic currency. Fed money accounted for 21% of high-powered money in April 1917, but by November 1918 this had risen to 59%. The member banks of the Federal Reserve System accomplished this by lending to their customers for the purchase of government bonds and then rediscounting these loans at one of the 12 Reserve Banks. After 1917, the Fed clearly utilised its new powers to ‘furnish an elastic currency’, not to alleviate or prevent a money panic, but to assist government war financing. WWI was the first major conflict to be fought by the United States since its Civil War. On that occasion, it was necessary to suspend the gold standard. On this occasion, the newly introduced currency elasticity permitted the country to remain on the gold standard. For US investors in 1917, the “elastic currency” kept money easy during a period of war and the gold standard in place. Investors who expected a suspension of the gold standard or its maintenance with associated tight money had failed to understand how the creation of the Federal Reserve System had changed the operation of the monetary system.

It was to be expected that the cessation of hostilities would depress the high levels of war demand, and bring about economic contraction. Just such an economic decline began in August 1918, even before the Armistice. But while many expected a prolonged decline, the contraction had run its course by March 1919. The public shifted to holding less cash than it had in the war period, and more deposits. This return of high-powered money into the commercial banking system helped to stabilise monetary growth. Just as important were the actions of the Fed Board, which kept interest rates low through 1919 and at a significant discount to market rates. This further encouraged member banks to borrow from the system and increase lending. The Fed justified its action as necessary to fund the government’s floating debt and to prevent a slide in the price of government bonds, now a key asset and source of collateral to the banking system. In performing this support operation the Fed stretched the elastic currency as much in this postwar period as during the conflict (see Figure 3).
Although there was significant debate within the Fed and the Treasury, the belief was that somehow the system could distinguish “legitimate” borrowing from “speculative” during this period of artificially low rates. This was not the case, and a speculative bull market in industrial equities and commodities raged through 1919. It had long been a basic principle of investment that wartime inflation would be followed by postwar deflation due to the operation of the gold standard. However, now the reverse occurred as the Fed stretched the elasticity of the currency even further to assist the government with its funding requirements. Investors playing by the old rules missed the bull market in stocks and commodities in 1919.

It was in this postwar period that investors seriously misread how the monetary system would operate. The ability or willingness of the Fed to exercise the power of elasticity was subsequently misconstrued due to its activities in 1919. Many assumed the Fed’s willingness to stretch the elastic currency had sufficiently circumvented the operation of the gold standard to prevent any future dramatic rise in interest rates. The Fed, which provided the system with no credit prior to November 1914, was providing around $3 billion by the end of 1919, a sum equivalent to almost 4% of GDP. With Fed credit rising from a base of zero, it was not surprising that some investors could believe that much higher levels of elasticity could be permitted. In this new environment, it was believed that borrowing funds for speculation in rising asset prices was a lot less risky than it had been before the birth of the Federal Reserve System. It was this misjudgement by investors that led, after the stock market party of 1919, to the more painful hangover of 1920–21.

What had apparently been forgotten was the statutory limit to the elasticity of the currency, which was rapidly being reached. The legislation required the Fed to hold gold reserves of 40% against notes, and 35% legal tender reserves against net deposits. Internally, the Federal Reserve had established its own minimum of 40% total reserves against net deposits and note liability. With gold leaving the country and the commercial banks encouraged to lend by sub-market rates provided by the Fed, a decline in the reserve ratio ensued. Having already declined significantly during the war, the ratio fell from 48.1% in December 1918 to 42.7% in January 1920. The Fed watched the decline without action, but in the first quarter of 1920, there was room for manoeuvre as the government began to retire federal debt.

The key reason for continuing to stretch the elastic currency was now gone. While the statutory power existed to suspend the reserve requirement and continue the stretching, the performance of the money market was
suggesting early in 1919 that no suspension was expected. Tightness in the
money market was already evident, with call money rates at 15% by June
1919, rising to 30% by November. The Fed made its first move to prevent the
continuing decline of the reserve ratio in November/December 1919 by
raising the discount rate - most banks increasing the discount rate to 4.75%
in that period, with all banks increasing the rate to 6.0% by January/February
1920. The willingness of the Fed to stretch the elasticity of the currency to
its limit played a role in the postwar bull market in industrial stocks. The
reaction forced by the decline in the Fed’s reserve ratio towards its statutory
limit was to play a major role in the ensuing bear market.

As well as a heavy focus on the new monetary institution, investors in
1921 paid particular attention to alterations in the general price level. While
inflation is regularly a topic of discussion in today’s financial press, there was
a far greater focus in 1921. This focus for investors on prices was dictated by
the operation of the gold standard and its impact on the prices of securities.
Under the operation of the gold standard, bear markets in stocks were
normally associated with a loss of competitiveness, deterioration in the
external accounts, tightening liquidity, economic contraction and a decline
in the general price level.

A question for any investor in assessing the end of this process was
whether domestic prices had become competitive relative to prices of key
trading partners. If this was the case, the process could reverse, with
improving external accounts, easier liquidity, and economic expansion all
acting to produce an improvement in equity prices. Judging when the deflation, begun in 1920, would be complete was particularly difficult due to the scale of prior price adjustments; from June 1914 to May 1920, wholesale prices in the US rose 147%. Judging how competitive the US was after such inflation was further complicated by the high wartime inflation of its key trading partners, which were operating with flexible exchange rates.

In the immediate postwar era, declines in the French franc, mark and sterling against the US dollar produced material capital flows into these jurisdictions as foreign investors bet on a return of these currencies to the gold standard at their pre-war levels. However, such confidence increasingly evaporated and a slide in exchange rates began in 1919. From the beginning of 1919 to the start of 1921, the franc and the mark had fallen by more than 60% and sterling almost 30% against the dollar. There had also been very high levels of inflation in other nations and it was thus not clear to what extent prices in the US would have to deflate to produce a balance in the external accounts under the gold standard.

Judging how large this adjustment would need to be was the key to understanding how tight liquidity would be and how much economic activity would be depressed. As the bull market in industrial shares lasted until November 1919, there were those who believed no such adjustment was necessary. They were wrong.

How did an investor in the postwar era assess the level of domestic prices dictated by the operation of the gold standard? It was not surprising that many were confused due to the scale of the dislocation to the global economy caused by WWI. The magnitude of price rises had been the largest witnessed in the US since the Civil War and nobody knew exactly how the relatively new Federal Reserve System would influence price determination. Prices had been rising before the US entered the war, and one might have expected that, with the Fed largely inactive until April 1917, the gold standard would have acted to restrain prices in that period. This was not the case as gold poured into the US (see Figure 5) and the stock of high-powered money increased.
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Lessons from Wall Street's four great bottoms

Russell Napier

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