Sand Spring Advisors LLC

72, 22, 7 –
The Ancient Language of Mathematics
Upcoming Pi-Related Cyclical Rhythms
&
The Macro Picture in Europe and Asia
In Relation to the U.S.

by,

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Readers of Sandspring.com know that it is our belief that the number pi is as cyclically important to human behavior and market rhythms as it is to the solution of a 9th grade geometry problem. We have previously espoused that there is likely a multiplicity of pi rhythms running through human history and market behavior.

Perhaps it was just an accident that the December 1989 high in the Japanese Nikkei was exactly 6,282 (2 * pi * 1000) days before the July 20, 1998 date that marked the major equity high set just before the Russian debt/LTCM crisis. Perhaps it is just a coincidence that the distance between the first World Trade Center bombing and the second attack spanned 8.6 years – just missing being exactly 3,141 days apart. Perhaps it is a coincidence that exactly 314 calendar days after 9/11/2001 was 7/22/02 – a day so very close to the current S&P 500 closing low to date. Perhaps it is only a coincidence that the floods experienced by Germany this past summer were exactly 157 years (or 50 * pi) after the last catastrophic floods of Europe in 1855.

Or perhaps there is something truly cyclical going on here – perhaps the rhythm of life, mostly unseen by modern man?

We have a number of pi related dates that we want to discuss looking forward in time in addition to the forthcoming November 7, 2002 date --which is ½ * pi * 1000 = 1571 days since the July 20, 1998 equity high. One of these dates is July 8, 2003 and another important date window is December 30-31, 2004. Before jumping into why we deem these dates of some importance, it might first be interesting and useful to pause for some ancient history related to pi.

From 10,500 BC or Before

The above three numbers in our title this month "72, 22, 7" relate to numbers held in great reverence by the Druids and other ancient cultures. 72 in particular appears everywhere in Druid traditions. There are 72 letter-strokes required to write out the 22 characters of the ancient "Ogham" alphabet that

Druid priests used for secret communications, and that alphabet contained 22 letters and 7 vowels – the ratio of which 22/7 =3.1428 is a pi approximation.   Many of the great pyramids of Mexico include designs using 72 pieces of jade, and 72 is also "hard wired" into the design of Egypt's Great Pyramid, since its original height of 5,813.23 pyramid inches (a pyramid inch being 1.0011 x a modern day inch per Sir Isaac Newton) * 43,200 is very close to the Earth's polar radius as measured in pyramid inches. 72 likely plays a role here since the number 43,200 can be obtained by multiplying 72 x 12 * 50 (12 being the number of signs to the Zodiac and 50 being equal to 72 minus 22).

And if in modern days we know that the circumference of any circle or sphere (in this case let's say the Earth) is 2 * pi * R, where in the Giza Pyramid did the ancient builders potentially show us pi?

- Consider this: The original height of the Pyramid's apex is 5,812.98 pyramid inches, and each side of the pyramid is 9,131 pyramid inches from corner to corner (in a straight line). If the circumference of the Pyramid (4 x 9,131 = 36,524) is divided by twice its height (5813.23 * 2 = 11,626.46), the result is 3.14159, which just happens to be pi. Incredibly, this calculation is accurate to six digits. So the Pyramid is in many ways takes a square and turns it into a circle, showing mankind over the centuries an actual formula to calculate the circumference of the Earth. This final formula becomes the height of the pyramid (5,813.23 pyramid inches) * 43,200 (to bring it up to scale) * 2 * pi = 1,577,904,644 pyramid inches which when brought back to modern day measurements by dividing by 1.0011 PI/inch and turning inches into miles (by dividing by 12 in/ft and dividing again by 5280 ft/mi) = 24,876 miles. This is extremely close to the actual earth's circumference (that depending upon whether measured from pole to pole or around the slightly fatter equator, measures between 24,860 and 24,920 miles).

- Other numbers pop out of the Giza Pyramid as well related to the Sun and time. Each of the Pyramids four sides, when measured as a straight line, are 9,131 pyramid inches, for a total of 36,524 PI. At first glance, this number may not seem significant, but move the decimal point over by dividing by 100 and you get 365.24. Modern science has shown us that the exact length of the solar year is 365.24 days. The length of the antechamber (116.26471 pyramid inches) leading to the King's Chamber within the Great Pyramid multiplied by pi also happens to equal 365.25. Were the pyramid builders also showing us by the use of different scales that they knew of the base 10 mathematical system as well?

- The ancients' use of the base 10 system seems even more probable when one considers that the height of the pyramid times 10 raised to the 9^{th} power happens to equal the mean number of pyramid inches between the Earth and the Sun, while the length of the Jubilee passage within the pyramid times that magic number 7 times 10 raised to the 7^{th} power equals the mean distance to the moon in pyramid inches.

We could go on and on with other examples, but enough. There are too many coincidences here not to view the Pyramid of Giza as a mathematical treasure chest of some sort.

Most historians believe that the use of the number 72 likely stems from a cosmological word "precession" or the wobble of the earth on its axis. This wobble ever so slowly changes the point where the sun appears each day in relation to the 12 constellations of the Zodiac. The wobble specifically causes a minute one-degree shift every 72 years. In ancient times, there was of course much focus on where the sun was on the two annual equinoxes and two annual solstices that demarcate the shift in seasons. The ever so slow precessional slippage means that each constellation on the horizon houses the sun at each solstice/equinox point for 2,160 years (360 degrees /12 zodiac signs = 30 x 72 years = 2,160 years), and all twelve of the constellations cycle move past the four key solstices/equinoxes in a total of 25,920 years (360x 72)…[yes, a number coincidentally ever so close to the circumference of the earth in miles].

Of all the crossings, the spring equinox was the most important to the ancients, and the label of the current "age" of mankind. Thus, as corny as it might sound, we presently live at the dawning of the age of Aquarius with the constellation of the water-bearer poised to succeed Pisces as the house of the sun on the spring equinox. Pisces being the last 12^{th} sign of the Zodiac would also have made this shift particularly important to the ancients, and a transition that they might have viewed as potentially turbulent since Pisces within the Zodiac is also the sign of "self-undoing" – of materialism and competitiveness that will not give way easily to a new more enlightened societal order.

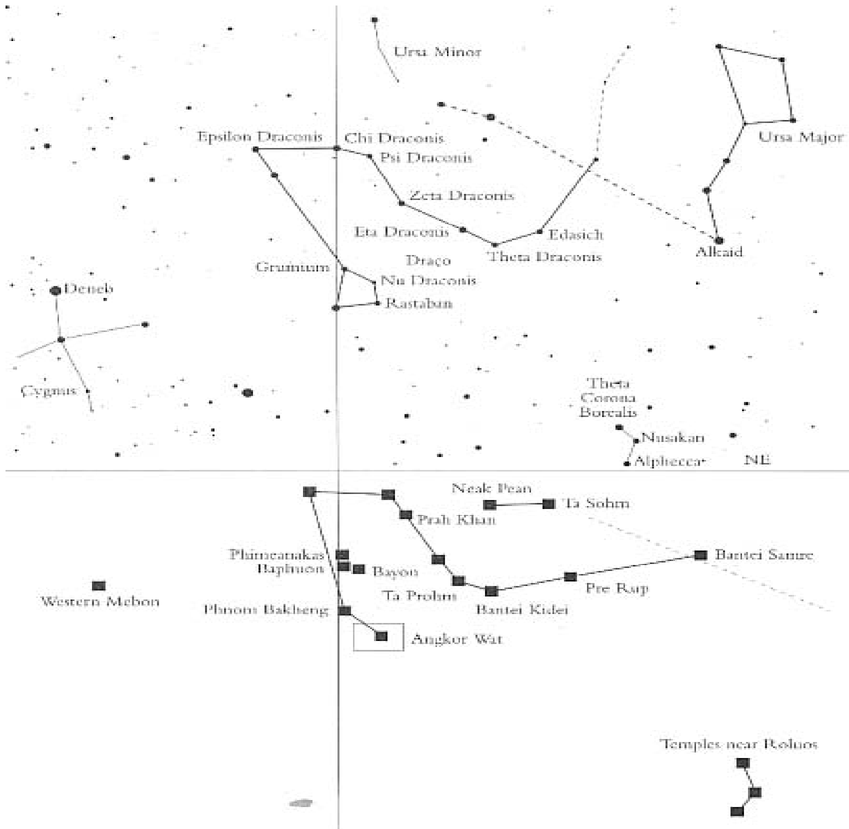
And just as the spring equinox shifts out of Pisces and into Aquarius, so too will the winter solstice shift out of Sagittarius and into Scorpio, while the summer solstice moves out of Gemini and into Taurus. The last time such a configuration graced the earth was from approximately 4380 B.C to 2720 B.C.—interestingly a time that even predates the estimated period of construction of Egypt's pyramids around 2560 BC. And yet such a configuration is depicted as such on the ceiling of the Dendera Temple in Egypt. This is clearly a leftover configuration from an even earlier civilization.

So too does the precipitation-induced weathering pattern on the limestone of the Sphinx suggest to historians that the Sphinx monument dates back even further in history than the pyramids. Although in 2560 BC, Egypt was as bone dry as it is today, the Sphinx shows deep vertical fissures and undulating, horizontal coves that according to experts could only have been formed by thousands of years of heavy rain – rain that must have fallen on the Sphinx *after* it was carved. The last time climetologists estimate that such a weather pattern could have existed in the eastern Sahara was between 7000 and 5000 BC. The Sphinx's original construction therefore likely even pre-dates this period. In so far as the Sphinx is in the shape of a lion and stares due east toward the rising sun on the spring equinox, it is notable that the sun would have been rising in the constellation of Leo (the celestial counterpart of the lion shape on Earth) in approximately 10,500 BC. It is thus likely from this period that the Sphinx dates – implying that a very sophisticated long lost "earlier civilization" populated the Earth at one time from which both the Zodiac and this "mathematical coding" embedded in ancient monuments finds its birth.

For those truly interested in this "mathematical coding" topic, we have studied with great interest a video entitled "The Code" (suggested to us by one of our subscribers) produced by geo-mathematician Carl Munck. This video is not easy to find and is only available a various specialty bookstores on the web (one being: http://www.earthpulse.com/products/thecodematrixwest.html), and the video is crudely self-produced. But Munck basically argues most convincingly within this presentation that using Giza as the ancient longitudinal Prime Meridian (in lieu of the modern-day Greenwich Meridian), mathematical significance (often involving pi) can be found in the global longitudinal/latitude grid map coordinates of a wide variety of other ancient edifices around the world including Stonehenge, Mexico's Teotihuacan and Quilquilco pyramids, Germany's Go-Low Circle, and the Great Octagon of Newark Ohio, among others.

The number 72 even appears once again – with the famous Cambodian monument of Angkor Wat being located exactly 72 degrees longitude east of Giza.

And just as the three great pyramids of Giza resemble in many ways the layout of the stars that form the belt of the constellation Orion, the layout of temples at Angkor resemble on the ground the constellation of Draco the Dragon (otherwise known in the West today as the Big and Little Dipper).



Source: "Heaven's Mirror" by Graham Hancock and Santha Faiia

The overall implication, particularly from the Munck video, is that some sort of either seafaring or maybe even extraterrestrial civilization laid out with perfect precision a wide range of monuments around the world starting over 12,000 years ago – a geodetic map that reveals mathematics and the perfection of pi perhaps as its underlying "god." Since modern man was not able to even measure longitude effectively until the invention of marine chronometers in the eighteenth century, this is particularly wondrous to consider.

Once this civilization chose the respective locations for monuments using mathematical precision, the monuments themselves then often acted as an earthly reflection of the heavenly constellations above. Indeed, these constellations still act as earthly symbols for us today in an almost eerie "As above – So below" fashion as described by Moira Timms in her book *Beyond Prophecy and Prediction*:

> "If a star map is superimposed over the Earth with the pole star placed over the terrestrial North Pole, we have a celestial clock making one revolution daily. The noon point of the map is the Great Pyramid of Giza. Thousands of years ago, Egypt was known as the Land of Khem. The Khema were a group of seven major stars (in the constellation of Taurus) known today as the Pleiades. If the map is placed with the Khema over the Land of Khem (Egypt) – specifically directly over the apex of the Great Pyramid – then the constellation of Taurus falls over the Taurus Mountains of southern Turkey; Ursa Major, the Great Bear, rambles over Russia; the head of Draco the Dragon coils up over China; Orion over Iran/Iraq; Aries the Ram over Rome, and Capricorn (identified with the god of Pan) falls over Panama…Aquila the Eagle spans the United States. The analogies are obvious, and quite impressive."

Kind of neat isn't it? Anyway, for our purposes here, suffice it to say that a very intelligent early civilization almost certainly existed and appears to have known something about geodetic global grid-mapping, and thus almost certainly realized that the Earth was round. If they did not call it such, they were also likely understood pi as a magic "perfect" constant. Given this civilization's equal focus on the heavens, they also likely would have put some stock in the modern-day astro-analysis techniques of Arch Crawford to forecast periods of equity stress and relative ebullience.

How is that Crawford keeps being ranked among the most precise market timers year after year? Does he appreciate a certain heavenly rhythm or force that somehow influences man's daily psyche? And if pi was so important to this ancient civilization, and modern historians have been so slow to understand and accept many of the historical assertions made above, what else has modern man missed?

The Mayan Calendar, Sunspots, & More Immediate Dates of Importance

The Mayans in particular appear to have been a culture that believed in self-renewing cycles of the soul and society across time. And even from two thousand years before Christ, their calendar is very detailed as to its ending point – a date, which translated into the modern calendar, is December 23, 2012.

What could possibly happen on that date that merited an entire culture making note of it so long ago?

We obviously do not know the full answer to that question, but we do know that the same solar flare maximum that we pointed to last October in our "Cycle of War" article (and which continued to present a particularly volatile sun throughout the early part of this year), will be due to re-erupt once again just about the year 2012 in its normal 11-year cycle. As with active sunspot activity that occurred in the Revolutionary War, Civil War, World War I, World War II, and other more recent periods of earthly hostility, this obviously and unfortunately implies major war on our planet at that time. Did the ancients understand how this "As above, So below" phenomenon actually works?

With all of this somewhat esoteric material as a background, and hopefully now with an expanded appreciation of pi "coincidences" through history, let us shift our attention to potential pi rhythms within our capital markets over the forthcoming several years. Here, we generally see two periods that appear particularly concerning.

The first of these windows in time is the period around the June-July 2003. June 1, 2003 will specifically be 628 days (2 * pi * 100) after the events of September 11, 2001. A minor PEI cycle date then follows on July 27, 2003 (8.6 months from Nov 7, 2002). In between these two dates is July 8, 2003 – a day we deem potentially more important than either. July 8^{th} will specifically be 6,282 days (2 * pi * 1000) after another catastrophic event – the April 26, 1986 Chernobyl nuclear explosion.

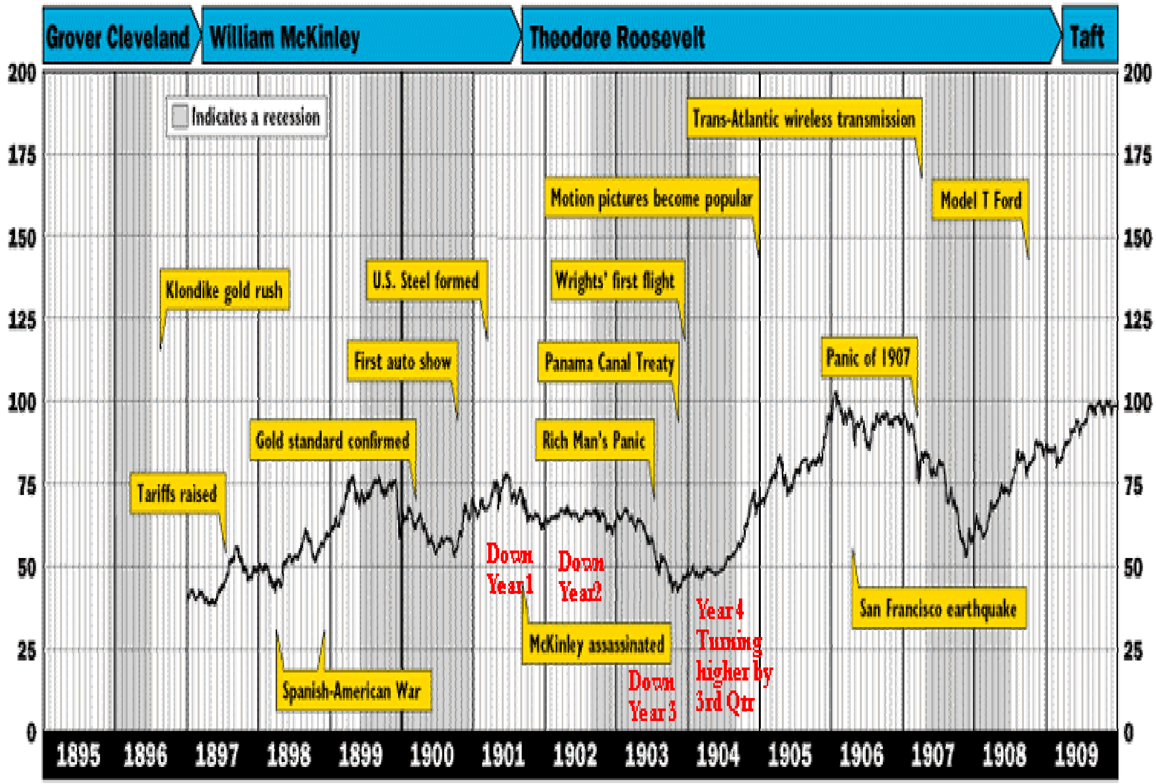
If for argument sake, November 7, 2002 ends up as an equity market low, then we would expect to see any rally that might develop out of November 7, 2002 subsequently hit some sort of nasty wall or geopolitical surprise around this June-July window. In any case, just to be safe, we would not advise being in New York City or near any nuclear reactors next July.

If, however, November 7^{th} represents a reaction high toward 1002 on the S&P (as we have been forecasting as our preferred rhythm interpretation) then perhaps July 8, 2003 will represent a period of true investor despondency, capitulation, and a more tradable bottom than we have seen to date.

After Three Down

This latter rhythm holds at least some historical appeal – at least if the last 100+ years of the Dow Jones Industrials holds any implications for the future.

In its entire history, the Dow Jones Industrials has only declined for three years in a row on four occasions: 1903, 1931, 1941, and now once again in 2002. In the prior three instances, and despite the obvious long-term tendency of the DJIA to go up, the 4^{th} year has always started off poorly, with mid-year lows, and a rally attempt only later in the year. We show each of these earlier periods below.



Grover Cleveland
William McKinley
Theodore Roosevelt
Taft
Indicates a recession
Trans-Atlantic wireless transmission
Motion pictures become popular
Model T Ford
Klondike gold rush
U.S. Steel formed
Wrights' first flight
First auto show
Panama Canal Treaty
Panic of 1907
Gold standard confirmed
Rich Man's Panic
Tariffs raised
Down Year1
Down Year2
Year 4 Turning higher by 3rd Qtr
San Francisco earthquake
McKinley assassinated
Down Year 3
Spanish-American War
200
175
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1895
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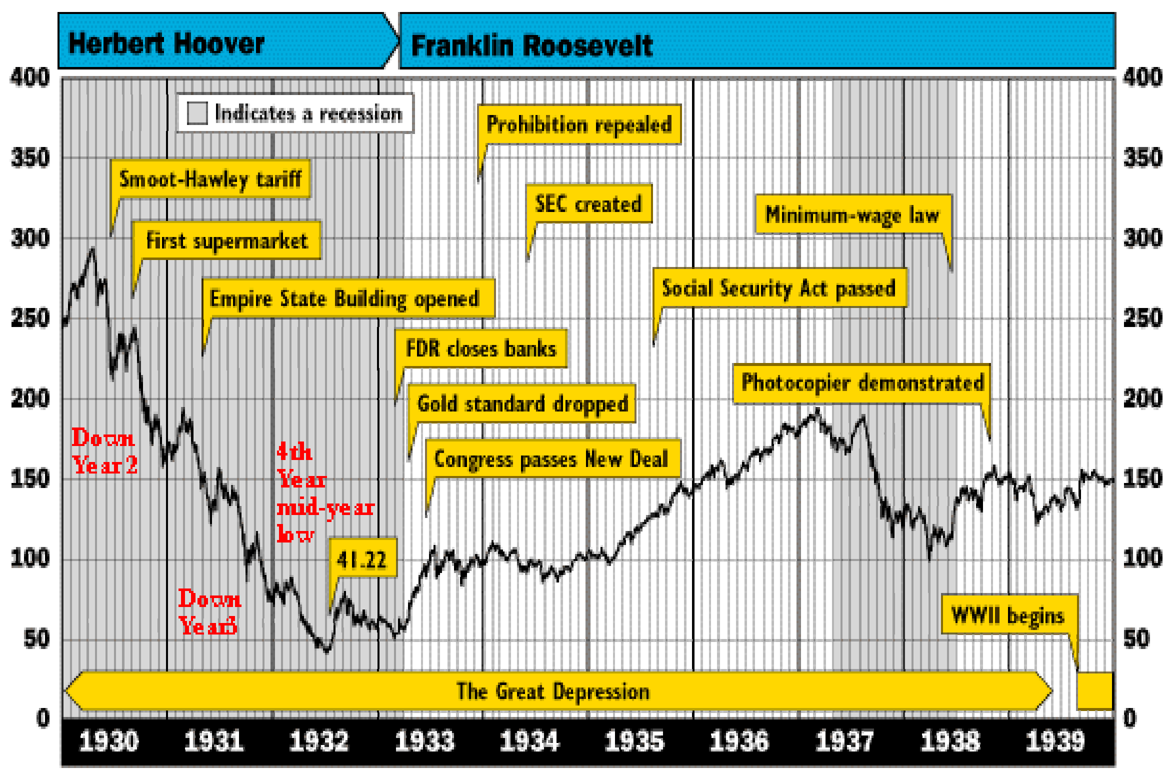

Herbert Hoover
Franklin Roosevelt
Indicates a recession
Prohibition repealed
Smoot-Hawley tariff
SEC created
Minimum-wage law
First supermarket
Empire State Building opened
Social Security Act passed
FDR closes banks
Gold standard dropped
Photocopier demonstrated
Down Year 2
4th Year mid-year low
Congress passes New Deal
41.22
Down Year3
WWII begins
The Great Depression
400
350
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250
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150
100
50
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1931
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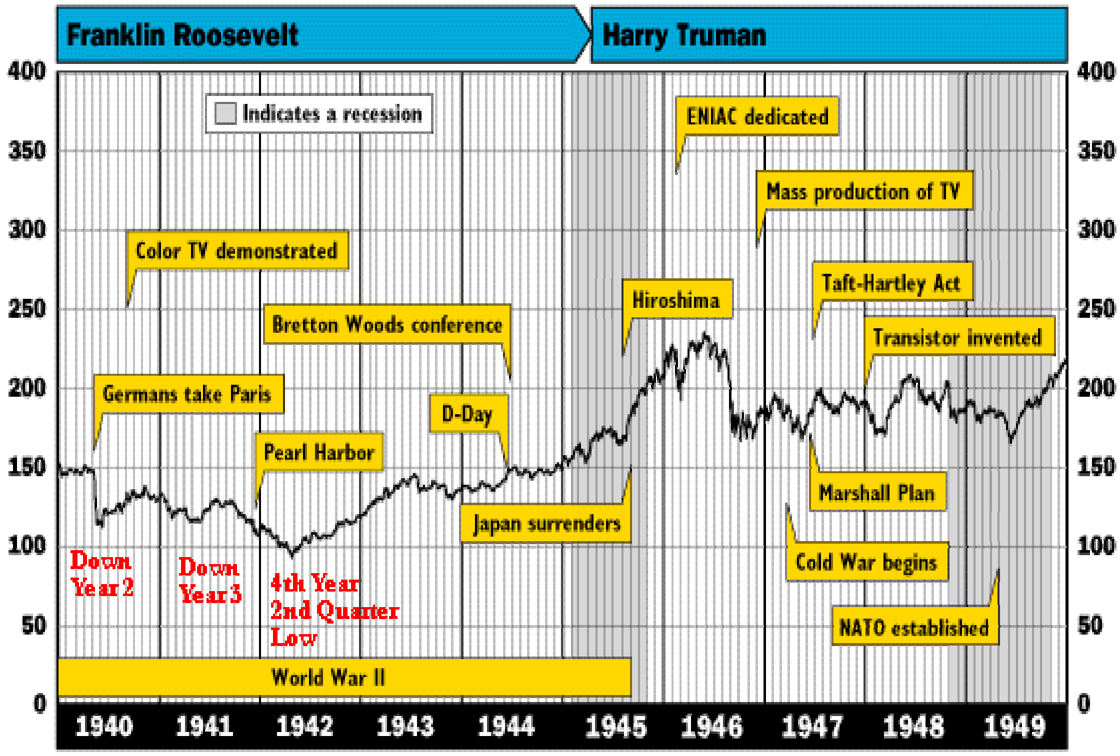
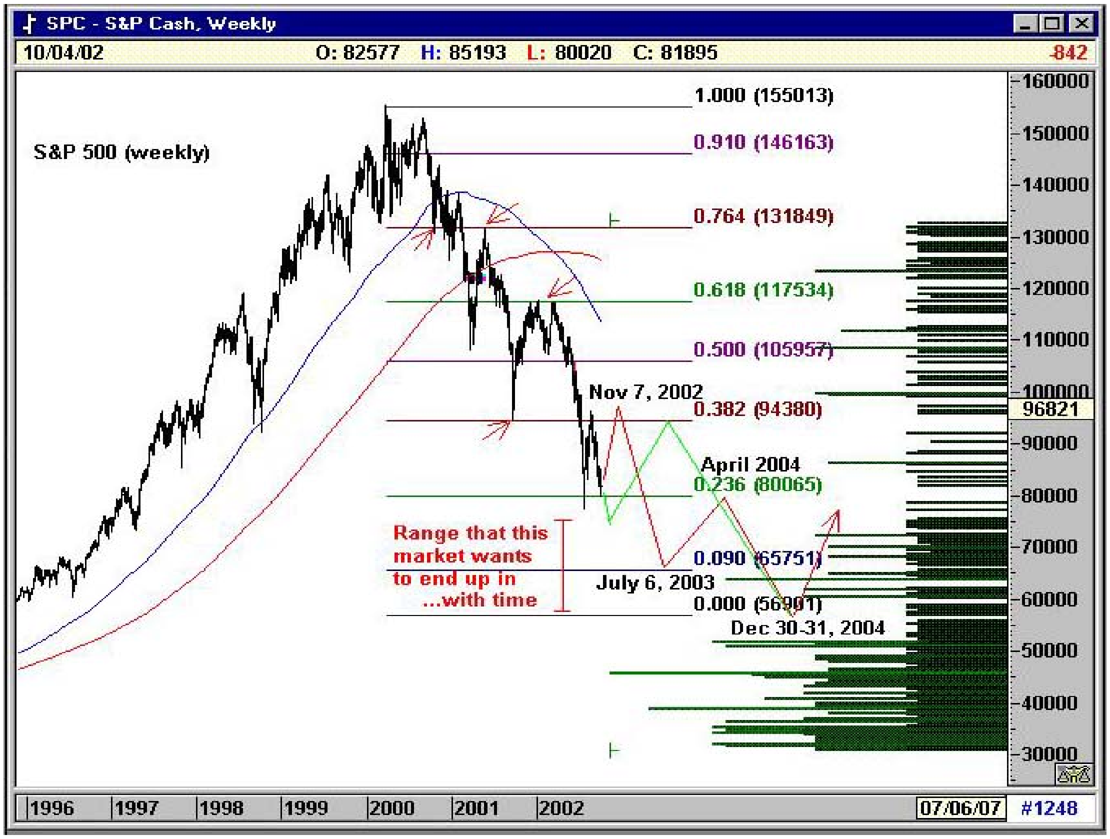


While the statistical relevance of such past patterns may not be high, both psychologically and fundamentally we like a mid-2003 low better than a mid-2003 high scenario. It would likely be a moment of true capitulation and fear, before setting up for a relief rally of sorts into early 2004 when one must imagine that President Bush will be pulling out all the stops to somehow dress up the U.S. economy in advance of the November 2004 presidential elections.

But a second potentially even more important date window also lingers beyond June-July 2003. This period is December 30-31, 2004. It will represent 6,282 days (2 * pi * 1000) from the October 19, 1987 equity crash low. It will also represent a 2.15-year cycle distance (a quarter of the 8.6-year cycle) from November 7, 2002. Presuming a Nov 7, 2002 high, and a market low in June-July 2003, followed perhaps by 8.6-months up into April 2004, prices would likely decline into December 30-31, 2004.

To summarize these thoughts, we offer below an idealized plot on an old chart of the S&P 500 that also shows Fibonacci fractal clusters. The red line shows our preferred path at this time, and the light green line represents a still possible path depending upon what November 7, 2002 first yields.



Longer-term Macros – Europe No Savior

Beyond December 30-31, 2004 is when we truly anticipate debt-deflationary pressures to yield to reflationary policies at any cost. It should be a period somewhat akin to the late 1930's-1950's yielding to the inflation filled 1960's-1980's – perhaps as the Republican party gets completely thrown out of power by a disgruntled public and Democratic "Big Government" deficit spending takes over in a huge way. Wars being inflationary and the Mayan calendar period of 2012 likely being war-filled, a slow slip and slide toward a true collapse in modern-day fiat paper money is likely to start to transpire – but that will be then, not quite now. Gold bulls may still have to be somewhat patient, particularly if the metal is on a high this November.

Meanwhile, elsewhere in the world, we see Europe as probably a continued mess going forward as ECB monetary and tax policies perpetuate a poor environment for entrepreneurism and business. We believe increased civil unrest simply has to emerge in Europe with time. Has the average American even noticed that the German DAX Index has basically been cut in half in just 6-months since March of this year? Does the average American realize that the DAX is trading at just a quarter of it early 2000 value – or do they believe that this was just a NASDAQ phenomenon?

And yet, as shown on the chart below, interest rates in Europe are effectively at the same level that they were back during the global boom-times of late 1999, and twice the levels that now exist in the U.S. This is because as the ECB is focusing on the past battle against inflation instead of the future battle against corporate insolvency, depression, and social unrest. There was even some talk of higher taxes to help finance all the governmental costs related to the summer floods – a concept that the average German must find incredulous. Moreover, if we have previously spent considerable time detailing pension fund problems within the U.S., just consider that half of Germany's population is going to be 50 or older by 2025. It's no wonder that extremist right-wing political parties are gaining in popularity across Europe. A revolution from "gray hairs" is certainly coming.

Maybe in the very short-term an ECB rate cut will emerge in order to give the global equity markets their bounce into November that feels appropriate to our gut. But longer term, Europe and the euro are unlikely to be much of a "safe haven" against ongoing debt-default problems in the U.S. Indeed, Europe arguably is even more of a mess than we are, with many German banks having bought into financing the U.S. tech bubble at exactly the wrong moment in time (see our old Oct 1, 2000 article "M&A Currency Imbalances"). There is every indication that Europe is now on the slippery slope toward a similar stultified financial system as has existed in Japan for over a decade.

Back in December 1998 at the dawn of the new euro-currency, we wrote the article attached as Appendix A entitled "Where Will All the Volatility Go?" In it we stated that courtesy of the unified euro, corporate credit spreads in Europe would likely become wider and more variable than they had ever been previously and that European equity markets would certainly become more volatile as well. Both views have largely come to pass, with the following words from that article still ringing particularly true to us:

> "How ironic it is that in a world now so concerned about a new potential "credit crunch" that the euro may actually increase the rationing of credit rather than relax it….This is just the stuff that fuels the start of new wars. One is told that the European community is supposed to be a level playing field, but in reality it never can be. Just as the guy who resides in style on Park Avenue lives in some fear of the street punk a few blocks away who lives in a ghetto, one neighbor gets jealous of another neighbor's relative prosperity. In society, the result is crime. In the macro-economy you get demonstrations, social unrest, strikes, and – at the extreme – war."

Where to Hide

So if the U.S. remains generally vulnerable into late 2004 and Europe is potentially in even worse shape, is there anywhere for a potential equity investor to hide, or at least seek relative value?

Some might argue that one of these days, Japan's economic situation has to improve after already having been beaten up for 12 long years (12 perhaps representing a complete cyclical rotation – like the Zodiac). Likely this will occur sooner than either Europe or the U.S. return to normal times, but first Japan needs to somehow coax its countrymen to lighten up on all the low-yielding JGBs that they have been hiding within as safe haven investments in an effort to avoid Japan's shaky banking system. The easiest way to do this may be to make it absolutely clear to investors that Japan is purposefully devaluing its own currency (something that no central bank has ever been prevented from doing when desired). A devaluing currency and weakening JGB market would then make it imperative for Japanese capital – which still represents 30% of the world's total savings – to find a new and better "safe haven" home, likely within "real" assets (property, factories, equities, gold) both within Japan and beyond its shores. Such a scenario would also make it imperative in our mind that any bottom-picking equity investment in Japan at the current time be hedged back into dollars via short yen forward currency hedges.

A report also recently came across our desk from Gavekal.com suggesting that Asia should with time slowly emerge as a relative winner compared to both the U.S. and European markets. We largely agree with this view.

Not only would Asia likely be the first to benefit from an unlocking of Japanese savings currently hiding in JGBs, but the Chinese economic system is largely going to continue to grow regardless of what happens in the Western world. Eventually this will make the entire region less dependent upon exports to the U.S. and more of a pan-Asian block of cross-country import/export activity than it is today. In GaveKal.com's words: "This is somewhat akin to moving from a one-cylinder engine to a multi-cylinder engine," with the emergence of a stronger Asian consumer also very bullish longer-term for global commodity markets.

Many people likely do not realize that the total market capitalization of Asian markets currently remains very small, with ex-Japan Asian markets amazingly enough carrying a total market capitalization no greater than the four largest U.S. companies – GE, Microsoft, Wal-Mart & Exxon. This small capitalization still causes liquidity within the region to remain less than desired, but part of good investing is to prudently purchase asset classes when they are less liquid and sell then when they become more liquid.

Moving forward, a more diversified source of trade should certainly cause the volatility historically associated with this region's capital markets to decline, and thus the risk premium of its capital markets as well -- particularly relative to Europe and the U.S.

Please don't misunderstand us. We would not rush out aggressively buy into Asian markets today, but instead, we would simply be attentive to value situations that may develop within these markets over the next two years. For those with an international bent to their portfolios, look for mutual funds and hedge funds with Asian expertise and involvement, not European expertise/exposure. This is certainly the path we are following in our allocation decisions for the Wimbledon Sand Spring Class L Fund that Sand Spring Advisors acts as co-manager of.

So there lies our macro vision for the world both cyclically and fundamentally out several years, and with a big chunk of pi-related rhythms throughout. Of course, we always conduct our analysis in a step by step fashion, and we await with much anticipation what November 7th actually delivers. This will help firm up our specific convictions going forward. As discussed above, a low near November 7th would significantly change our anticipated 9-month path, although we continue to expect December 30-31, 2004 to be a major equity low in the U.S. and Europe.

(Please See APPENDIX A on the following page for an old view of what the EEC and ECB would likely cause in Europe)

Send us your comments at information@Sandspring.com.

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