

Newsletter – 2014 Predictions and Results

My name is Max Rudolph. I consult with companies on enterprise risk management, investment and strategic planning topics. I believe you can reduce risk and increase return simultaneously. I live in Omaha, Nebraska, USA, am credentialed as an actuary and hold a CFA charter. I write a monthly newsletter and each January post my predictions for the year. Late in the year I review and analyze what actually happened, including any tweets I got right during the year. Coverage is mostly related to risk management and investments. Some are written at a high level, dealing with the general economy, and some cover specific topics. Most discuss issues that I am stewing over and need to do a brain dump. I read a lot, and that impacts what I am thinking about. The newsletters are educational in nature and do not constitute investment advice. They are released publicly at www.rudolph-financial.com within 6 months after they are released to subscribers (predictions are made public immediately).

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Predictions for 2014

Please remember that these predictions, and my newsletters, are for fun and to encourage deeper thinking across topics and a longer time horizon. If I really knew what was going to happen, I would not share that information with you! You must make your own personal decisions, considering your unique financial circumstances, and not hold others (especially me) responsible for your own financial planning. If you don't accept these conditions you should stop reading now. For those still with me, Enjoy!

General happenings

Perceived stability is hiding a growing risk as debt levels remain high, which will lead to currency wars and inflation. Sometime soon the calm will break. It feels like geopolitical stability is building pressure in an earthquake zone. Whether due to natural disasters or man-made wars/terrorism, we are likely enjoying the calm before yet another storm. We are not ready for it. It could be that the population/sustainability tipping point is getting nearer, and more frequent extreme events make it harder to react until some event takes us over the edge into a new regime. Financially there are pressures leading toward inflation (debt, monetary policy) and deflation (oil supply, demographics, costs of climate change). Janet Yellen becomes Fed Chair in early 2014, replacing Ben Bernanke, and

several other members of the FOMC will also retire. Our strategy continues to be just-in-time science, and concentration risk in everything we do makes our way of life susceptible to one swinging strike.

- **Result:** Russia's engagement with Ukraine set in motion everything that followed.

The geopolitics of the world continue to evolve. Democrats are becoming the party of oil, and maybe business, as they recognize where lobbyist money comes from. Hillary Clinton has aligned herself with fracking interests, and has become the sane candidate for President in 2016. Republicans retreat to the right, a guarantee they won't win national elections. Europe continues to be a mess, and the US withdrawal from the Middle East combined with the impact of fracking will reverse many positive events for that region, and especially for women. Over the next decade we may see Iran rebuild its long-lost empire and become a regional economic power. China will need resources, and it will be interesting to see if they use negotiation or force to get it. Fresh water access is becoming more important. Glaciers are melting and runoff from snowfall is starting to come at the wrong time for crops. While I don't expect the world to collapse in 2014, event interactions and unintended consequences are becoming more important. It's time for the adults to enter politics. People committed to a single direction and unwilling to negotiate will only make the eventual results worse. Our critical path is becoming shorter.

Some scenarios are completely discounted by the public but have probabilities over the next decade or more that are material. Extreme events happen every year. They are very rarely specifically identified in advance. Hurricanes Sandy in 2012 and Haiyan in 2013 were massive events in their regions, but extreme events overall were limited in the US last year. The economy has so many variables that short-term forecasts are unlikely to look like what actually happens. In 2013 fracking provided oil supply that improved current account balances in the US, made the Middle East less important politically, lowered government spending and Chinese investment in Treasury bonds. Tensions are building, and the US will need to decide how its role will evolve in each region. While a stock market correction is overdue, the market will not have a major correction without some external event to drive it. Bubbles are not yet obvious, although some asset classes seem overvalued. How much is real and how much due to bond yields manipulated lower by the Fed? Here are some outlier scenarios that I think are more likely to happen in the next several years (some may not happen for a decade or more). Due to the long-term nature of these scenarios, in some years they might not change or only slightly be tweaked.

- Cyber-terrorism impacts the banking system or shuts down power stations **Result:** getting closer. Cyber hacking at Sony and several retail firms in the US is causing some to rethink the benefits of the cloud.
- Space junk knocks out a satellite used for public communications
- Atmospheric river hits California and dumps rain on San Francisco for a month **Result:** the Pineapple Express visited California and reduced the state-wide drought.

- A severe earthquake (or volcanic eruption) hits California, St. Louis or Seattle
- Super-volcano becomes active
- Fracking is declared illegal in the US or due to environmental impact **Result:** heavy tar sands oil created safety issues when it became obvious that it is much more volatile.
- China erupts in civil war or regional conflict with a neighbor over resources **Result:** more reports of doctored financial numbers seem to make China more at risk of a hard landing.
- Eurozone breaks apart – could be north/south, poor countries/rich countries **Result:** at year-end 2014 Greece seems ready to implode while imbalances between Germany and the south are getting closer to detonation.
- Venezuela erupts in violence, shutting down their oil industry – Argentina is at risk of making this a regional hot spot **Result:** this is very close to happening.
- A virus develops drug resistance and becomes transmissible by air **Result:** while transmission is difficult, the Ebola scare is not over and provides a good reminder that pandemics cover a broad range of viruses.
- Iran encourages regional conflict and becomes the Middle East’s superpower **Result:** while ISIS has gotten most of the headlines, it is likely that Iran is quietly forming coalitions.

These predictions were made in January 2014.

- Politics: Prediction – President Obama is now the oil president. Democrats must abandon their environmental roots to get funding nationally. Something will appear to happen this year on immigration reform but, much like gun reform, the status quo will remain. Economic woes have done more to slow immigration than any other measure. Who will the Republicans run for president in 2016? It’s a wide open race and the winner may not yet be a household name. Paul Ryan seems the best early bet. Chris Christie and “trafficgate” may have sealed his fate. If the Republicans go further to the right and there is not a financial crisis they will lose. If the economy tanks Hillary Clinton will drop out due to health issues, but otherwise she will give it a go and be the favorite. It’s hard to say how she will balance the ticket. The economy is evolving to a new state with a new (higher) steady state unemployment rate. It will move forward more quickly if the politicians can resolve budget issues. The taper will speed up but rates won’t rise until at least 2015 under Yellen’s watch. Watch for major problems in Venezuela in the short term with contagion throughout South America. Syria and Iran continue as hotspots in the Middle East, but problems may actually show up sooner in Turkey. Hosting the Winter Olympics in Russia is a risk for them as it will highlight issues and expose the region to terrorism. The Middle East is building a tension that may erupt soon between Sunni and Shia regimes in a regional conflict. Europe continues to kick the can down the road, but some deflation in the region makes the inevitable day of reckoning sooner than expected. So far Japan is winning its currency war, but it’s only a matter of time

before others join in. The risk of China experiencing an economic hard landing and consolidating around nationalism is increasing. This could have major consequences, everything from an internal revolt to a selloff in US Treasuries to an armed conflict. The next major wars will start in cyber-space, as all parties are probing for weakness and hiding in the shadows. A lessened reliance on imported oil by the US due to fracking increases the likelihood that China makes a resource driven power grab.

- **Results:** while I feel my oil predictions are fairly accurate, I did not expect the price to drop so far as it did in 2014. Immigration is still hard to define despite the president's recent attempts to clarify. Senator Clinton continues to be the Democratic favorite, but if the economy does not improve she may feel it is not worth her while to run in 2018. No clear Republican candidate has emerged, although Jeb Bush is the undeclared front runner. A Clinton-Bush campaign would be interesting. Rates have not been raised by a Fed chaired by Yellen. The strong moves made by Japan have had the same impact as a rate rise due to the stronger dollar. Tensions continue to rise but no event was large enough to set them off. Putin's power grab in Ukraine ended a slow period for geopolitical stress and continues today. South America is being hit hard by the low price of oil and Africa by the Ebola outbreak. Brazil is now a net exporter, so it is unclear where South America's growth will come from.
- Immigration reform: both political parties will reach out to Hispanics through legislation to set up the 2016 election. With jobs scarce in the US this becomes a less pressing issue and may be punted to 2020.
 - **Results:** President Obama decided to tackle this issue without Congress and it will be interesting to see if it withstands an expected court challenge. Both parties are posturing to this demographic with eyes toward 2016.
- Stocks: As the taper begins the US will enter a trader's market, with more volatility in both directions. The market in the US is certainly due for a correction but it is unlikely to be a crash unless sparked by an event. I continue to avoid bonds, using highly rated dividend stocks (not the highest rate but the most consistent) for this type of exposure. The US consumer is delevering, meaning there is less consuming. Single year results are very hard to predict. I am more comfortable looking at specific companies. With that said, plus or minus 10% seems a reasonable result for 2014. I still believe that over the next 10 years stocks will outperform both cash and especially bonds. Interest rates will either spike or remain low with possible deflation over time. Slow and steady up, the Fed's proverbial soft landing, is unlikely. Higher rates will be equivalent to a currency devaluation unless other countries make the same move. I understand why variable annuities force investors into bond funds when their options are in the money, but this reduced hedging cost seems to lock in the likelihood that the goal will not be met. It seems like a mispricing is in there somewhere. There is a slight chance of hyperinflation in the United States, and it might only temporarily relieve us from a demographics driven low interest rate scenario. It will take a few

- years for inflation to develop before suddenly appearing. Good companies to buy now are staples that can pass on inflationary cost increases to their customers while remaining low cost producers. Avoid life insurers until the regulators get serious about interest rate guarantee relief. Based on my filters here are a few companies that appear to be undervalued based on publicly available information (not recommendations, just ideas for further analysis) and year-end prices: Tidewater TDW 59.27, Hornbeck HOS 49.23, Seakor CKH 91.20 and Transocean RIG 49.42 (long TDW HOS). The S&P500 closed 2013 at 1,448. For those interested you can follow my portfolio at www.tickerspy.com under maxrudolph.
- **Results:** while I was low on stock returns (especially large caps), my specific stock recommendations did not do well. The flight to safety continues and owes its resurgence to actions by Russia (invading Ukraine with a very oil concentrated economy) and Japan (Abenomics, leading a currency war). My top returns in 2014 came from HBI and INTC. The tickerspy website closed mid-year.
 - Unemployment: Structural employment provides a floor of about 6%, but this is confusing as the labor force participation rate is not steady or consistent with prior data. Additional municipal defaults may impact the job market. The temporary drop of extended benefits immediately caused some workers to stop looking.
 - **Results:** unemployment remains low, and many states increased their minimum wage in 2015.
 - Residential home market: US regions will continue to become less correlated with each other as regional economies improve and inventory works its way lower. Fannie and Freddie continue as a discontinuity waiting to happen. The trend of young and old moving in with empty nesters will continue, much to the dismay of everyone involved. Even if rates fall again, little refinancing will occur. That ship has sailed. Watch for the Canadian housing bubble to pop over the next couple of years.
 - **Results:** Housing in the US continued to rebound. Fannie and Freddie generate lots of Congressional sound bites but no changes.
 - Volatility: The VIX closed 2013 at 13.72, at the lower end of its annual range. I have thought for several years that if VIX was a predictor of the future it would be higher. Known risks include heavy personal and government debt levels, and extremely loose monetary policy that is about to tighten. I find it impossible to predict VIX but I think a reasonable range would be 20-25. A single digit VIX is definitely too low and above 35 is too high, but as usual I see more possibilities for a higher result in 2014.
 - **Results:** VIX remains too low and has ranged from 10 to 30 (brief spikes) before ending in the 15 range during 2014.
 - Oil: WTI oil on December 31, 2013 was about \$99, toward the middle of my long-term mean reversion range of \$80-120. Volatility continues to make short term predictions very risky as fracking supplies come on line and Iranian supplies open back up. US withdrawal of forces from Iraq/Afghanistan will also reduce demand. If oil prices fall below \$50, political instability in Russia and Venezuela

- will quickly follow. Venezuela may not need that big a drop. As the world economy improves the price of oil should increase with demand, but so much supply is coming on line that increases have not occurred. Either a geopolitical event or fracking concerns that drastically reduce supply would be needed to have a spike in oil prices in 2014.
- **Results:** here my range of 80-120 needs to be adjusted as the bottom fell out of the market in late 2014. The driver seems to have been the Japanese move toward quantitative easing while the US seemed close to raising rates. The dollar strengthened, and since oil is priced in dollars this led to a fall in oil. This causes problems for oil exporters, especially Russia and Venezuela, and initially helps the US recovery.
 - Credit risk: credit spreads continue to be tight as assumptions abound in the market about too big to fail companies and whether the government will ever allow large scale credit defaults. Junk bonds are not a good deal, but some municipals may outperform if you do the research.
 - **Results:** high energy sector issuance over the past few years is leading many to predict that junk bonds will have a high default rate over the next few years. They performed poorly in 2014.
 - Financial Services Consolidation: Bank consolidation will accelerate as the taper is discontinued. Hopefully a consolidator of these banks will grow to a large size over the next few years. Leverage ratios among large banks, especially Deutsche Bank, are reaching stratospheric levels. Insurance company consolidation has started, with private equity entering with unintended consequences for the life insurance industry. Federal regulation is moving closer but will take only baby steps in 2014.
 - **Results:** too early on this one as Japan's currency moves kept rates low in the US. Foreign insurers have started to buy US insurers (e.g., Protective).
 - Currency/Inflation: Japan has started a currency war. Who will be the next entrant? At YE2013 the Eur/USD exchange rate was 1.38. The dollar should strengthen due to fracking in 2014, especially against the yen.
 - **Results:** the Euro is down to \$1.21, the yen has weakened to 120 from 105 a year ago, and the Russian ruble has fallen by nearly 50%. Dollars are returning home to the United States, with repercussions in emerging markets soon to follow. Will this play out like 1994 (Mexico) or 1998 (Thailand, Russia, LTCM)?
 - Fed policy: low rates continue through 2014 as the mid-term election looms. Hopefully right after that they will be able to tighten, or else it will wait another 2 years. The US continues to be susceptible to a large catastrophe, financial disaster, or armed conflict.
 - **Results:** thankfully there was no catastrophe, and the Florida coast remained hurricane free yet again. Japan's strong currency moved has made it harder to move interest rates up, although many think an initial move up will occur in the first half of 2015.

Emerging Risks - Concerns

- Levees in California, earthquakes/volcanos, water poisoning in big cities, cyber hackers, transportation of oil and oil based products (e.g., downtown Chicago).
- Infectious disease - increased resistance to antibiotics (e.g., tuberculosis, staff infections or pneumonia), coronaviruses and new avian flu types that are transmissible by air.
 - **Results:** Ebola remains the headlines but other viruses remain worrisome.
- Global warming – unexpected side effects like new viral/bacterial attacks, along with coastal flooding, increased hurricane activity, stronger and more frequent tornados and convective storms, and shifting weather patterns that impact farming through changes to the jet stream.
 - **Results:** unfortunately nothing to change this view has occurred. 2014 was the warmest year on record.
- Earthquakes and hurricanes – the US is overdue for a major quake on the west coast and areas not normally thought of for seismic activity due to long dormant periods (e.g., Seattle, Yellowstone, St. Louis, New York City) are well into their cycle. I'm starting to worry more about at atmospheric river event in California. The drought is strong enough that there is no longer a season when wildfires are not common. Due to warmer air, more moisture is held in the atmosphere, with unknown results (so far it looks like this breaks up hurricanes and leads to stronger convective storms).
 - **Results:** fracking appears to cause small quakes but otherwise it was a quiet year.
- Malthus – too many people, not enough resources – will good intentions of the rich to save lives in the 3rd world lead to increased systemic risk for society (mass starvation and unstable regions) in the longer term? Are there unintended consequences and systemic risk associated with the “giving pledge” by the rich? The IPCC base year of 1998 turned out to be misleading as it was an especially warm year for its era. Look at all the data graphically. Population growth continues to exacerbate the problem. Some estimate the earth already holds three times as many people as is sustainable in the long run. I believe this makes us more susceptible to war, famine and disease.
 - **Results:** this is a topic I would like to research in 2015: why has Malthus been wrong so far? How should Japan look at their economy as demographics age and reduce the population. Why isn't it okay for GDP to reduce along with it? Are we looking at the right metrics?
- Concentration risk – this will be a hot topic over the next few years much as emerging risks have become. Whether it is power at the top of an organization, short term liquidity, geographic focus or silo risk focus, too much concentration in too few entities or people is a great risk. Eventually it will take you down. This should be a focus during strategic planning efforts. I have found that those who have strong investing abilities choose to avoid leverage. Unfortunately, margin debt is revisiting levels not seen since 2008. Not a good sign, especially when combined with other types of concentration risk.

- Terrorism – the Sochi Olympics will be very stressful even if no events occur. In the US, political extremists may become active leading into the election cycle.
 - Results: with the Middle East active the US heated up over racial issues in Ferguson, Missouri as well as NYC and other locations.

Top Actuarial Issues

- Defined benefit plan valuation – valuation methods need to be revamped to front end funding levels for both private and public plans.
 - **Results:** political rather than long lasting solutions continue to persist
- ORSA implementation – regulators will likely try to shoehorn this into existing processes and not use holistic thinkers who can think across risks and product lines. This is an even more important characteristic for reviewers. Capital requirements continue to move forward but no one really knows what they are doing. Groups that have worked on this issue for years are not part of the decision making process. When the C-3 Phase I interest generator model, which has not been updated in 20 years, replaces the mean reversion parameter all hell will break loose at companies primarily selling deferred annuities. Required capital will increase as models reflect today's recent rates. This will be a preview of the ramifications of a long lasting low interest rate scenario.
 - **Results:** ORSA implementation is slow going, but the NAIC is moving toward a checklist approach to everyone's detriment. A research project this year compared the new/old generators and surprisingly showed minimal differences as rates are not allowed to be negative and tend to rise through mean reversion. Using premium as the sole ORSA filing criteria shows the regulators need to accept input from outside sources.
- Product design – be sure to look at exposures in case hedges are not available.
 - **Results:** as I learn more about indexed products they worry me more and more
- Obesity/smoking – how will the various drivers of mortality and morbidity interact (some good, some bad)?

Strategic Scenario Planning

Look at stress scenarios qualitatively and graphically in addition to quantitative focus. Consider a combination of several deterministic scenarios, including one where the Wall Street tool kit is not available.

- Higher interest rates and inflation: grade 3% per year until you get to 12%
- Qualitatively consider 20% inflation environment (if you have annuities you should be testing the VM scenario generator – the mean reversion rate will update going forward so you have 20 years of historical data that was not included in the C-3 Phase I generator)
- Low interest rates – Japan scenario
- Flat equity markets combined with higher inflation

- Falling dollar – combine with high interest rate scenario
- Global climate change – how will this impact your business and suppliers (look out 20 years to consider new agents or a mortgage in southern Florida, where over \$100 billion of property value is at risk from a 3 foot rise in sea levels)
- Liquidity risk – consider your largest markets and what would happen if they dried up or were regulated out of business. Have you accepted risks that you thought were mitigated? A core line of business should not be at risk here. If it is then it should be a satellite line
- No diversification is allowed between risks
- If you are ambitious run a scenario with equity markets down 35% and 10 years' worth of deflation

Predictions from January 2008

Since posting my first annual financial predictions in 2007, there are 7 years of history to look at. Each year I will look back 5 years and share interesting comments I made that seem accurate in hindsight.

- “Economy: there is not much positive to look forward to in the United States.”
- “Credit risk will increase with unintended consequences as the sub-prime crisis plays itself out”
- “Counterparty risk – it is currently so concentrated that one misstep could have major repercussions. Watch the credit default swap market. Much of the economy is now concentrated in a few parties. This leads to more contagion in the system and more correlation in the tails.”

From the 2008 results document

- “Defined benefit plan valuation...Making assumptions above about 5% for future asset growth is irresponsible.”

Hopefully these annual letters look at things from a slightly different perspective than you see from others and make you think. That is my goal.

Happy New Year!

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