APPENDIX C

Round 1 Reasons For Projections

1. Annual increase in Consumer Price Index

Respondent 1

- The CPI in 2024 could be above 3.5% if there were a commodity price shock, such as oil.
- There could be labor unrest as the dependency ratio rises with the baby boomers retiring.
- Inflation could return to the 1950s, essentially zero expected inflation, if productivity increases continue and after many years of low and stable inflation.

Respondent 2

- A continued wave of technological change should drive robust economic growth

Respondent 3

- I don't think we will exceed historical highs. Commodities- even energy have become less important over time, as the economy has become increasingly service based. Even more importantly the late 1990's experience has inoculated the central bank against letting inflation out of hand. Volker was the cure to G. William Miller and the medicine was painful.

Respondent 4

- I believe the CPI could exceed 12% with in the next 20 years because of the ever-widening US budget deficit, dependence on ever-scarcer and more expensive foreign oil, and the fact that the retired and retiring baby boom generation will demand huge amounts of services pushing inflation (especially for health care) higher.

Respondent 5

- I think the CPI will rise both because there is pressure to reduce the foreign trade deficit and to avoid a crash in housing prices. The Federal Reserve will continue to keep increasing the money supply to achieve these goals

Respondent 6

- I think that CPI could be as low as -3% if the Fed is putting liquidity into the market and there is a shock due to terrorism or a serious natural catastrophe (volcanism, coordinated earthquakes/hurricanes, influenza pandemic). I think the CPI could be as high as 13% if the budget deficit and trade deficit combine with an oil shock or something similar to stimulate inflation.

Respondent 7

- I have used The Theory of Economic Series, which is described in Chapter 2 of my book published by Georgia State University: "protecting against inflation – and maximizing yield." (This book is in the SOA library.) I have also used subsequent data addenda and later articles. The theory takes into account underlying mood and business cycle changes. I believe that this is a unique actuarial approach, and that the actuarial profession can make a valuable contribution in this very crowded field, in its own way.

- Specifically, I am projecting that 2024 will be a pessimistic “A” period, for reasons such as the following:
    - Continuation of the post 9/11 mode of distrust
    - Failure to control litigation abuse
    - Resumption of the draft in 2009
    - Inside interest buildup becomes taxable in 2012
    - Devastating earthquake in California in 2018

- In addition, my “Boca Raton” economic scenario projector (which had first been presented to the CCA in 1999) is currently forecasting 2012 as a pessimistic “A” year! But furthermore, I note that 20 24 will be an uncertain election year with a lame duck president finishing her largely successful eight year term.

- (Incidentally, my answers to Question 2 will assume “other developments” which, although less likely, would transform 2024 into an optimistic “C.” year, and would change all of the answers to question 1(A).

- In all of my answers, I have used data for the entire 114 year. 1890 – 2003, and not just the last 40 years. But I believe that extreme conditions like those in the prior to 1950 could easily reoccur.

- With all of this being said as the thought process background, I will give detailed specific reasons for part 1(A) answers.
    - The expected inflation of 5% is the historic the average in pessimistic “A” periods. It is accompanied in 2024 by very low GNP growth and very modest money supply growth. A very flat yield curve is in effect. It is to be noted also, from part 1(A) response, that the real interest after inflation is negative.
    - The lowest plausible inflation rate (-7.2%) could occur if extreme depression exists, as in 1930 – 32. (Extreme mismanagement of foreign affairs and world trade could cause this.)
    - The highest possible rate (17.4%) could occur if 2024 is in the middle of extreme wartime conditions, such as prevailed in 1917 – 18.

Respondent 8

- The Consumer Price Index could fall below 1% sometime in the next 20 years because:
    - Potential introduction of an explicit 0-2% inflation target by the Federal Reserve could anchor inflation expectations and achieve the desired results. A period of prolonged weak economic growth precipitated by chronic fiscal and trade deficits, loss of competitive edge, a shift to rebuild savings by over-indebted consumers could also trigger a period of stagnation and borderline deflation. This risk would be higher in a world where exchange rates were not allowed to adjust to offset competitive and trade imbalances.

- I believe the Consumer Price Index could surpass 10.0% sometime in the next 20 years if the Fed’s credibility is eroded by deteriorating debt, fiscal and trade issues and/or sub-par growth triggers a return to more stimulative monetary and fiscal policy settings. Instability in the Middle East, tight energy and commodity markets or sudden disruptions to global trade/production because of geopolitical issues could cause a spike in headline inflation

Respondent 9

- Variable number 1: Reason:
- I expect inflation to be 2% in 2024 because the Federal Reserve has adopted, in my opinion, an inflation target of 2%, and it is reasonable to assume it will be successful, in the long run, in achieving this target. The downside risk to this forecast would materialize thanks to productivity gains. The upside risk would materialize if productivity growth slowed to 1970's norms, and rising demand in developing countries led to rising prices.

Respondent 10

- I expect that inflation will be accelerating in 2024. The big questions are: from what levels will it be accelerating? And, how soon will the acceleration begin?

- I expect the acceleration will be led by the cost of medical care. The U.S. population of older people (in or near retirement) will be growing rapidly in the coming years. With age comes increasing demand for care of age-related conditions.

- Before the acceleration, we may see years of very low inflation, perhaps even deflation. If this does happen, it will probably result from attempts by huge numbers of baby boomers to spend less, saving more for their retirement years. This could be exacerbated if younger generations, perhaps out of fear over the long-term viability of existing social security systems, become more conservative consumers than their parents.

- In contrast, the acceleration may have already begun. Although the current economic recovery has been spotty, it might slowly gain strength, with consumers discounting concerns for their future in pursuit of comfort in the present.

- I think we'll see more caution in consumer spending than that "highest plausible" scenario, but not so much caution that we see the "lowest plausible" scenario.

Respondent 11

- Reason: Global deflationary pressures are likely to continue as Asia develops. There is some risk of inflationary pressures

Respondent 13

- Inflation will be fueled by rising oil prices and the rise in China's economy with resulting higher wages and prices for exports to the U.S.

Respondent 14

- Reason: I think the CPI will be less volatile in the future because the FED has developed policy to control inflation and will be effective in managing it.

Respondent 15

- I believe that the energy inflation rate will dramatically increase due to the fact that all the current producers are at full capacity, unless there is a significant shift in the energy policy, we should start to see oil shortages. This is why I believe that there will be inflation in excess of 13%.

- I believe that there will be another deflationary period as well as a depression or major recession within that time frame and this would lead to a deflation percentage of -2%.

- This would because that a majority of jobs would travel to poorer countries and unemployment will grow dramatically.

Respondent 16

- The CPI is a metric combining core inflation with market price movements. I think we'll see a technology driven continued steady decline in the real prices of natural resources over the next two decades. This, coupled with ever increasing capital market discipline on government inflation, will continue to keep CPI changes in a socially tolerable range.

Respondent17

- My life has been as CEO of 4 corporate turn-arounds and 2 start-ups. These rates are a minor item I take into account as I run, primarily service enterprises. I draw on the knowledge, connections and business awareness of my CFO to inform me about how the items you are seeking effect the environment I am responsible for making decisions in.

- From a CEO perspective outside the insurance industry, I use future projections or ranges of rates, as a context to shape business strategy, and determine the tactics required to minimize or capitalize the rates. I need those rate estimates about every three years to shape strategy. I need those rate estimates every year to shape tactics.

Respondent 18

- Also, I don't believe, as a best estimate view, that any of the variables will go outside of the high/low range for the last 40 years. We have seen hyper inflation in the late 1970s/early 1980s and unprecedented low inflation from the early 1990s onwards, and it is difficult to envision inflation falling outside these ranges (at the 10^{th} and 90^{th} percentile levels) with anything other than the most extreme shock circumstances.

- It's helpful to consider why the extremes of the past have occurred:

- In the late 1980s, there was a huge structural shift in the industrialized economies as hugely improved technology meant much of the labor force was redundant. This had a large short-term supply side impact, as company structures were such that they could react only slowly to such change and rationalization couldn't take place overnight. Hence many companies were left operating inefficiently for some period. This, coupled with excessive consumer demand (in turn driven by excessive consumer borrowing), meant prices had to rise, and as the influences were worldwide, there were no compensating effects from cheaper import prices.

- In the early 1990s, the problems of excessive demand were properly understood and government monetary policy became remarkably effective at controlling money supply in times of interest rate pressure. Thus, at even the slightest hint of inflationary pressure, we have seen interest rates nudge up to combat the situation. Moreover, company structures are now such that they can react much quicker to technological change, so that there is a much shorter period when a company will be operating inefficiently.

- From the second bullet, my feeling is that the combination of tight monetary policy and an industrial environment that can respond much quicker to change is likely to persist for the next 20 years, and therefore I would err towards the more optimistic end of the inflation scale in my best estimate. However, because of the uncertainties around oil prices and increasing import costs due to increased dollar weakness (dollar weakness is likely to persist as long as trade deficits persist, requiring a weaker currency to boost exports and dampen imports) I would not say inflation can stay as low as 1-2% for the next 20 years – 3% is my best estimate.

Respondent 19

- At some point in the next 20 years it could be as low as -2% due to deflationary pressures from full globalization, unit of production costs fall with nanotech, biotech reduces waste, falling fertility rates, Latin American and African production begins to kick in increasing competition

- At some point in the next 20 years it could be as high as 20% due to inflationary pressure from Indo-China oil demands, oil production irregularities, Indo-China labor rates have substantially increased by 2024 (as did Japanese leading to outsourcing to China and the Tigers), increases in life expectancy increasing social security, pension, health care costs, security costs being distributed throughout society increasing costs and credit demands.

Respondent 21

- Inflation risk may be on the rise. Technology can raise productivity, but cheap goods today are due to cheap labor markets in China, India and other developing countries. As wages rise, production costs will rise. If those countries develop a consumer class that can drive economic growth (beyond US consumer demand), then they can create additional demand for manufactured luxury goods. Also, if alternative fuel sources are not developed, fossil fuel costs will put upward pressure on prices.

- Innovation in energy resources can remove dependency on oil and perhaps lead to downward pressure on costs. Chances are that even if these are developed, 20 years may not be sufficient to completely replace plant, machinery, and auto dependence on oil.

Respondent 22

- I expect the CPI to rise considerably over the next two decades because of the declining value of the dollar abroad and increasing reliance on imported goods, aggravated by the trend toward outsourcing and increasing restrictions on immigration.

Respondent 23

- I think extremely high CPI inflation will less frequent in the next 20 years, as the Fed has made the commitment for price stability. In addition, the movement of the baby-boom generation into retirement will increase political pressure for low inflation. CPI inflation of less than 1% is very unlikely, as the risk of deflation is a major concern for the Fed.

Respondent 24

- As long as the monetary authorities refuse to accommodate any resurgence in inflation – whatever its origin – there is almost no prospect that inflation will rise above the (explicitly or implicitly) targeted rate of 2%. The range is to allow for the possibility of recession (temporary) or overheating (also temporary).

Respondent 25

- CPI basket weightings will probably change over the next 20 years. Oil/fuel price component is volatile and this component could be subject to short-term periods of high inflation or deflation.

Respondent 26

- We could see sustained higher rates of inflation if the dollar enters a sustained period of weakness against other major world currencies. This scenario is plausible if the savings rate disparity continues between the US and our major trading partners.

Respondent 27

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- Increasingly diverse economies, less resource driven, should be subject to somewhat lower than long-term average inflation in the future.

Respondent 28

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- The dollar will not return to the status of the dominant world reserve currency and, with continuing globalization, consumer goods in the U.S. will experience price rises. These will be offset, however, by intense competition from Asia and Latin America.

2. 10 Year Treasury Spot Yields

Respondent 1

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- Same reasons a 1.
- Yield is largely inflation driven.
- Could have very high or very low growth (boom or mild recession) in that particular year of 2024. Recessions occur about every 10 years, followed by boom

Respondent 2

- A continued wave of technological change should drive robust economic growth

Respondent 4

- I believe the 10-year Treasury could exceed 15% because of rising inflation and a continuation of inflationary expectations for many years to come. Also, to finance the enormous US budget deficit, interest rate will have to rise to attract foreign capital.

Respondent 5

- We can keep buying more than we sell internationally only if foreigners continue to invest in the US. This means that interest rates will have to be higher than elsewhere to attract foreign investment and purchase of government bonds.

Respondent 6

- Reason Much the same reasoning as CPI. I think the 10T could be as low as 3% if CPI is low and the Fed is putting liquidity into the market due to a financial shock due to terrorism or a serious natural catastrophe (volcanism, coordinated earthquakes, / hurricanes, influenza pandemic). I think the 10T could be as high as 20% if the budget deficit and trade deficit combine with an oil shock or something similar to stimulate inflation. I also think there is a non-zero probability of a demographically motivated war that will cause rates to spike. The Chinese one child policy will leave many young males needing mates, along with many poverty stricken countries (e.g.,, Bangladesh or even Ireland) will have more youth than their economies can support.

Respondent 7

- Bond yields tend to be high in pessimistic “A.” periods. 4.79% is intended as a historic average for ten year bonds in “A.” periods.
- A high of 11.9% was seen in 1979 – 80, Accompanied by extremely high inflation of the Carter era.
- The low of 1.43% was seen in 1947, and was the result of extreme fed controls in the early cold war/ McCarthy period. Conditions like this could reemerge!

Respondent 8

- The 10-year Treasury yield could fall below 3.5% sometime in the next 20 years if:

    - U.S. government engineers a prolonged period of fiscal austerity to produce fiscal surpluses and ultimately adopts a policy of balancing budgets. At the same time, the Fed commits to keeping inflation in a 0-2% range. Even then, long-term interest rates have been trending lower for the past 2 decades and would have a hard time breaking much below 40-year lows in the absence of deflation/depression.

- The 10-year Treasury yield could exceed 14.0% sometime in the next 20 years if:

- Foreign investors diversify portfolios away from U.S. dollar assets as alternative global investments become more attractive, particularly if the U.S. does not solve its chronic trade and fiscal deficits and boost domestic savings to reduce its heavy reliance on foreign funds. Highly stimulative U.S. monetary and fiscal policies, rising inflation and the inability to generate domestic savings to reduce reliance on foreign borrowing (or pay for foreign debt services) could produce and unprecedented rise in rates across the yield curve.

Respondent 9

- Variable number 2: Reason:

- I expect the yield on 10-year US Treasury notes to be 4.3% in 2002 because the combination of projected labor force growth, productivity growth and the achievement of the inflation target imply a growth rate of nominal GDP just somewhat above this level. The upside risk is due to the upside risk of the inflation expectation; the downside risk is also attributable to the same cause.

Respondent 10

- Regarding the “highest plausible value,” although past peaks in the inflation rate have exceeded the 10-year treasury spot yield of the time, conditions in 2024 will be quite different from those peaks. If, the inflation rate is running high in 2024, it will be because people have continued to favor current consumption over saving for retirement. At the same time, calls on government promises for retirement income and medical care will be straining federal budgets. Even if a large proportion of investors turn to treasuries for security, the growth in demand for treasuries will fall behind the growth in federal commitments, pushing up real interest rates on these securities.

- In contrast, the same conservative mind-set that could result in some deflationary years might lead many people to delay retirement or to quickly seek ongoing employment in some form of retirement career. That, in turn, would contribute substantially to federal tax revenues, and might even slow the growth in calls on Social Security and Medicare. The extra productivity of these post-retirement workers could further increase the amount of money looking for secure investments while reducing the need for government borrowing.

Respondent 11

- A real return of 300 basis points seems reasonable. If inflationary expectations heat up yields could temporarily get into the double digit range.

Respondent 13

- U.S. Dollar will lose value and foreign governments will switch to place their funds in euros instead of dollars, forcing U.S. Treasury rates to rise to attract investments.

Respondent 14

- The treasury rates will predominately be a function of a real rate plus inflation. I would expect a real rate to be around 3.0% and the level of inflation to be a larger driver of treasury rate volatility.

Respondent 15

- Due to the fact of variable 1 max of 13% due to the oil shortages, I believe that the 10 year rate will be 13% - 3% = 10%.

Respondent 16

- 10 year Treasuries will maintain a 3-5% real rate of return over inflation. History shows that in our modern economy the government can "manage" short term rates, but not mid or long term rates. Supply and demand for domestic government debt is driven by the real rate of return vs. other alternatives, which now are many, including global capital markets.

Respondent 18

- Low 4% Expected 6% High 10% Reason: My values are consistent with my inflation forecasts, generally a gap over inflation of 3-4%. I am confident that government policy will continue to react quickly to inflationary pressure, and therefore I would expect a strong correlation between short-term rates and inflation. I also assume that the yield curve will be upward sloping, so that there will be some differential between long-term and short-term rates.

Respondent 21

- Linked to inflation risk. Deficit reduction, given current levels, will take several years to accomplish, if at all. New service and manufacturing activities executed in US and exported overseas will be required to generate growth and keep interest rates down. Weak dollar – not just against Euro, but against Asian currencies – can also affect money flows leading to higher interest rates. At the high end, rate environment of the 1980s are plausible. Having experienced the 1980s, Fed is likely to act before that happens.

Respondent 22

- I expect the 10-year treasury rates to increase substantially in parallel with increased inflation and also due to the demands of service on the federal debt, which will be abnormally high for at least the next two decades.

Respondent 23

- My projection of 10-year Treasury rates is based on my view of inflation. On average I expect a real yield on Treasuries of about 2.5%, but there is a wide range around this average. In a very low inflation scenario we could get a period of very low real yields. On possible upside to real yields would be a major sell-off in the dollar at some point in the next 20 years in reaction to the very large U.S. current account deficit.

Respondent 24

- Because of my answer to variable number 1, 10-year rates will be limited in their upward movement; and downward as well. The range is to allow for recession or overheating. Not much risk to rates from budgetary pressures or currency re-alignments.

Respondent 25

- 10 year Treasury yields not as volatile as 90 day yields. FRB management has been effective in recent years but personnel/policy changes at FRB are possible.

Respondent 26

- We could see sustained higher rates of inflation if the dollar enters a sustained period of weakness against other major world currencies. This scenario is plausible if the savings rate disparity continues between the US and our major trading partners.

Respondent 27

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- Best guess may be roughly long-term growth plus inflation and I am guessing long-term growth at about 3%

Respondent 28

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- The dollar will be displaced as the world's reserve currency, adding at least 1% to Treasury bond yields. In addition, high deficits will discourage foreign investors, and the government will be forced to raise yields to attract capital.

3. S&P 500 Total Rate of Return

Respondent 1

- This is highly volatile series and could have above 24% or below minus 10% loss due to immediate growth, recession or under & over valuations in recent years.
- Or irrational fears or exuberance.

Respondent 2

- A continued wave of technological change should drive robust economic growth
- I believe the total return on US stocks could be less than -40% because high interest rates and poor fiscal policy will damage corporate earnings and hurt investor confidence.

Respondent 5

- I believe corporate rates of return will rise because taxes will be reduced, and income taxes may even be replaced by consumption taxes. This will increase investment and productivity.

Respondent 6

- Reason I expect lower returns over the next 10-20 years as the discount rate rises. In any one year returns can range from +/-20%, but overall they will trend lower than 10%.

Respondent 7

- The answers given are the historic common stock results for the 21 "A" periods that have occurred since 1890. All turn out to be within the questionnaire's "range."
- The overall average of -4.2% is what would be expected in this very poor and Pessimistic "A" year 2024.
- It is noteworthy however, that good common stock yield can nevertheless occur in such periods! The highest plausible yield of 24.9% occurred in the "A." period 1979 – 80, as an example. (Despite the very high Carter-era inflation, and the Iranian hostage crisis, which was then taking place.)
- The lowest plausible yield -29.8% occurred, not surprisingly, in the depression years 1930 – 32.
- An overall fortuitous comment about common stocks: one is always surprised by the high average yield, measured over a long period. The yield has been increasing over the last twenty years.

Respondent 8

- Equity markets are exceptionally volatile, though globalization and cross-linking of exchanges should eventually dampen overall fluctuations. The -10% to +20% possible range reflects this somewhat less volatile possible outcome. Increased cross-border, competition in both goods and services may well reduce the average return of equities, though it would still need a reasonable spread over treasuries to attract investors, given the added risk associated with such investments.

Respondent 9

- I expect an 8.3% total return on the S&P 500 composed of a 5% price return and a 3% dividend yield. The 5% price return is in line with the nominal GDP growth assumption. The upside and downside risks represent my assessment of the “normal” volatility around this mean.

Respondent 10

- This variable can be quite volatile. The highest plausible value of this variable is most likely in an environment that supports the lowest plausible value of the other variables. Vice versa, the lowest plausible value of the variable would most likely coincide with the highest plausible values of the other variables.

- My “lowest plausible value” assumes that 2024 happens to be at or near the worst of a bear market. In 2024, the baby boom will be centered very close to the Social Security retirement age. The U.S. will be the last of the major industrialized nations to reach this point in its demographic transition to a massive proportion of its population in retirement. Stock markets might already be weak from foreign retirees’ needs for cash. Many in the U.S., seeing their own retirement savings diminish, might flee from equities in order to preserve whatever principal they might have left.

- My “highest plausible value” assumes significant increases in service sector productivity. This would be especially helpful if this brought substantial improvements in the productivity of medical workers dealing with the concerns and conditions of the aging population. In contrast to the downside potential already mentioned, I think it is implausible (though not impossible) to see an exuberant bull market in 2024, which would seem to be almost a requirement for higher returns.

- My “expected value” sees somewhat of a balance between those who cash out their equity portfolios, either to meet current spending needs or to find more stable investments, and those who hold on to equities for their potential to deliver solid income in the coming years. The negative total return results from substantial numbers exiting the equity market. To mitigate the decline their stock prices, many companies will see the increasing demand for current income from people moving into retirement and will work to meet this demand by shifting their focus to provide solid dividend income to their shareholders. Those shareholders who can afford to hold their equities, will be willing to suffer some loss in nominal value, in exchange for the upside potential of rising dividend income. This, in turn, will mitigate the declines in equity prices.

Respondent 11

- Reason: I have no way to reliably guess equity returns. I am confident but not jubilant about equity returns over the next 20 years and 10% seems close enough to historical levels with a margin for conservatism that seems a reasonable expected value. Since this is a volatile variable there is no way to reliably guess bounds.

Respondent 13

- Stock market will be weak due to relative decline in U.S. economy. The heavy costs of the imperial overreach of the Bush administration will finally have to be paid. There is no such thing as a free lunch.

Respondent 14

- I think of equity returns will equate to a spread over treasuries on an expected basis but be subject to fairly large short term volatility.

Respondent 15

- Due to the fact that the economy had a major run in the 1990's, I believe that as this generation ages, the next generation will create another bubble in the market. This bubble will burst and hence the negative -33%.

Respondent 16

- In any given year the domestic equity market can exhibit large swings. The instant liquidity we enjoy can increase volatility, as capital can be repositioned quickly. I would not be surprised to see a single year's returns break new records, positive or negative.

Respondent 18

- Low -30% Expected 10% High 30% Reason: This is probably the most meaningless of the forecasts for a number of reasons:

- Equity returns are extremely volatile from year-to-year. To predict the annual return in one particular year (2024) in many years time (20) is purely a guess.

- A better estimate would be the long-term annual growth of equities over 20 years, which would help minimize the volatility around a single year estimate and would be more meaningful.

- My high and low values are based closely on the 40 year high and low history – I think there is a reasonable chance -30% and +30% could be experienced in years to come. My "expected" value is really more an estimate of what I think the long-term annual growth of equities will be in the next 20 years, and I wanted to capture a reasonable equity risk premium over my long-term bond yield best estimate (6%).

Respondent 21

- Greater volatility than bonds, but I think that average will be about the same in the 2 markets over the 20 years. This implies greater upside potential, but also significant loss potential.

Respondent 22

- I foresee dampened performance in the equity markets not for want of available capital but for lack of feasible projects. Some of this was evident in the tech bubble of the late 90's when bushels of capital were squandered in pursuit of pecks of opportunity. Various factors will diminish the role of the US as a *situs* for new capital projects. Mainly innovative talent will stay where it is rather than immigrate to the US. The US will be well along toward second-rate status by 2024.

Respondent 23

- My projection for the average total return to the S&P500 is based on my outlook for nominal GDP growth of 5.5% to 6%. The total return on the S&P can be slightly higher, but lower than the historical average given a lower inflation projection than the historical average. I see no reason to expect the volatility of S&P returns in the future to be lower than past volatility, so the upper and lower limits in my projection for 2024 are based on the distribution of returns over the past 30 to 40 years.

Respondent 24

- Better than fixed income returns due to equity risk premia and better than historical productivity growth rates.

Respondent 25

- Estimate reflects risk premium over fixed income returns as well as historic volatility in the equity markets.

Respondent 26

- Equity returns will always be volatile, so I'm not sure that the right question is being asked. I believe a more appropriate question would be "what will the annualized return of the S&P 500 be in the years surrounding 2024." The current consensus perspective on long-term returns in the equity market remains too strongly influenced by the experience of the last 20 years. For most of the last century the market has run in alternating 15-20 year cycles, with periods of double digit returns followed by periods of very low returns. I believe we're still in the relatively early stages of a low return cycle which may have another 10-15 years to run. By 2024 we could then be in the midst of another long bull cycle.

Respondent 27

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- Total yield historically may be about 10% average and that is consistent with 3% growth, 3% inflation, and 4% risk premium.

Respondent 28

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- Corporate ROI should continue broadly within historic ranges.

4. Corporate Baa Spot Yields

Respondent 1

- Same reasons as 2.

- A recession would involve a credit crunch, raising yields, a boom an excess of demand for credit risk, lowering yields

Respondent 2

- A continued wave of technological change should drive robust economic growth

Respondent 4

- See question 2. Basically same response except that corporate bond yields must necessarily be higher due to a default risk premium.

Respondent 5

- I believe corporate spot yields will rise because of increasing competition for savings. The retirement of the baby boomers will mean dis-saving on a massive scale as they quit paying into annuities, IRAs, etc., and start withdrawing funds.

Respondent 6

- I expect Baa spot spreads to be consistent with the past, so yields will be driven by the Treasury curve.

Respondent 7

- Corporate bond to bond yields seem to average 107% of the long-term treasury coupon yields. I have used that relationship in arriving at these responses. But I have used data only for the 21 “a” periods that have occurred since 1890.

- But the plausible low of 2.4%, which is out of the questionnaires range, occurred in the “a” year 1947, as result of extreme fed control during this early cold war/McCarthy era.

- The plausible high of 12.0% occurred in the “a” time. 1979 – 80, accompanied by Carter era inflation and the hostage crisis.

- But it is possible, incidentally, that the issuance of long-term corporate bonds will have ceased entirely by 2024. This would go along with aversion to long term liabilities generally. But any such development (which I am not formally “predicting”) might make question 4 somewhat “moot.”

Respondent 8

- Corporate paper is priced off the Treasury curve, adjusted for perceived relative risk. The lowest plausible value assumes both government prudence and a perception of relatively low corporate risk because of healthy balance sheets, strong earnings momentum, and favorable economic conditions. The highest plausible value assumes the reverse, resulting in sharply higher spreads over treasuries.

Respondent 9

- The central expectation for the Baa yield has been driven as a relationship with the 10-year Treasury yield. Good profitability and strengthened corporate governance should keep this spread relatively tight.

Respondent 10

- At the high end, as calls on government promises of retirement income and medical care accelerate, investment grade corporations will appear to many as more conservative than the government. Still, being of smaller scale and lacking the power to effect legal changes in monetary policy, corporate bonds will require positive credit spreads over treasury securities. The spreads will, however, become smaller as the credit risk seems increasingly insignificant in relation to the large-scale federal commitments.

- At the low (optimistic) end, credit risk will seem about as significant in 2024 as at has been in the past.

Respondent 11

- I expect Baa (i.e. BBB) corps to behave at a modest spreads to Treasuries. Unless there is a major change in attitudes to credit risk, an average 200-250 basis point spread to Treasury seems reasonable. At high and low extremes it is pure guesswork as to how market panic or market jubilance might influence Baa yields through expectations about corporate profits or through a thirst for increased yield (thereby reducing the spread over Treasury).

Respondent 14

- Assumed BBB spreads could range from 75 – 250 bps over the 10 year treasury with an average around 150 bps.

Respondent 15

- My assumptions are based on a average 2.8% spread over the 10 year interest rate.

Respondent 16

- I believe that basic business risks are reasonably transparent and well diversified amongst the mid-cap companies. However, political risk is on the rise, and is quite unpredictable (Marsh Mac, Enron, Citi, etc.). These political risks could cause abnormally high credit spreads in the future.

Respondent 18

- Low 5% Expected 9% High 14% Reason: The key feature to capture here is a reasonable credit spread over Treasuries. My expected yield of 9% is 3% above the 10 year Treasury which is consistent with the history and has a reasonable feel to it as a long-term best estimate notwithstanding the recent narrowing of spreads generally in the markets. The 9% is also a little under my equity bets estimate of 10%, which looks consistent.

Respondent 21

- I believe that we are in a low rate environment today, so expectation over the long run is for rates to rise. Range reflects expectation on range for Treasuries.

Respondent 22

- Rates on corporate debt will move in parallel with other factors. Issues with corporate creditworthiness will also arise as ill-advised accounting reforms produce surprising results and distract attention from corporate governance and management conduct issues.

Respondent 23

- My projection of the Baa corporate rate is based on a differential above the 10-year Treasury yield. Based on the experience since the late 1960s, Baa yields have on average been about 200 basis points above 10-year Treasuries, but there have been instances of much wider spreads. I tried to incorporate this historic volatility in Baa-Treasury spreads into my upper and lower limit projections.

Respondent 24

- Normal corporate/government spreads

Respondent 25

- Estimate reflects premium over 10 year Treasury for credit risk/liquidity

Respondent 26

- We could see sustained higher rates of inflation if the dollar enters a sustained period of weakness against other major world currencies. This scenario is plausible if the savings rate disparity continues between the US and our major trading partners.

Respondent 27

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- Total yield historically may be about 8 average and that is consistent with 3% growth, 3% inflation, and 2% risk premium.

Respondent 28

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- Corporate bond issuers will need to offer a premium over government instruments, but probably less of a premium than historically because of the erosion of the appeal of U.S. government debt.