INVESTMENT ADVISORY COMMITTEE

The Investment Advisory Committee held its quarterly meeting on Thursday, September 1, 2011, at the Bureau of Investments, Great Lakes Conference Room, 2501 Coolidge Road, Suite 400, East Lansing, Michigan.

Members Present:

David G. Sowerby, Chairman
Allan R. Pohl, LARA
Phillip J. Stoddard, DTMB

In attendance from the Department of Treasury: Andy Dillon, Jon M. Braeutigam, Robert L. Brackenbury, Gregory J. Parker, Karen Stout, Brian Liikala, Richard Holcomb, Peter Woodford, Paul Nelson, Jack Behar, Jim Elkins, Giles Feldpausch, Travis Haney, Amanda Ellis, Marge McPhee, and Emma Khavari.

Others in attendance: Rebecca Gratsinger, Vinod Khosla, Samir Kaul, Akram Boukai, Molly Jason, Jason Diotte, Renaye Manley, June Morse, Frank Cody, Ellen Hoekstra, and Joe Curtin.

<u>Call to Order and Opening Remarks</u>

Chairman David G. Sowerby called the September 1, 2011, meeting to order at 9:32 a.m. He began by noting that the market was off about 15% through August 8th, then had a respectable rally off the lows of 8%-9%. The Russell 2000 dropped 20% from close to close but the S&P 500 did not. He noted that the market has felt and acted like a bear market particularly in July and August with the average stock in the S&P 500 off about 25% from its 52-week high. It is difficult for the equity markets and there is plenty of risk around the world. He stated that the 10-Year Treasury returned 13% which is almost exactly what the return was a year ago.

Chairman Sowerby noted that the focus of the September Investment Advisory Committee (IAC) meeting would be: from the bear market in stocks, the bull market in Treasuries – what is being done to be opportunistic, to be proactive. The goal: being able to look back six months/twelve months from today and ask, what was done and what was the rationale used to try to take advantage of mispricing or opportunity in the market. He shared his thoughts about being proactive in markets that in the future will be choppier and with not just one-way up to 7% or 8% return per calendar year. He noted that just as important is the longer-term strategic positioning of the portfolio with asset allocation. These items should be discussed at this IAC meeting.

Chairman Sowerby turned the meeting over to Treasurer Dillon. Treasurer Dillon greeted everyone and noted that while the SMRS' rankings are not very exciting, staff should not be obsessed with the ranking. However, in a year staff should be able to say that changes were made that took advantage of what was happening today. He noted the book that Reinhart and Rogoff wrote which indicates over the next ten years there will be slow growth, moderate inflation, and more frequent recessions. Treasurer Dillon discussed the point that behavior is historically-driven; however, this seems to be a new era which is driven, in large part, by the world-wide sovereign debt that lays the foundation of the next ten years of slow growth, moderate inflation, and more frequent recessions. Treasurer Dillon also expressed concerns about the condition of Europe.

Treasurer Dillon discussed the possibility of re-casting the portfolio to win. He expressed that continuing to look backwards and what happened in the past may hinder the portfolio; today the vision should be to position the portfolio to improve the ranking and to win. Chairman Sowerby thanked Treasurer Dillon.

Approval of Minutes of June 1, 2011

Chairman Sowerby asked for a motion to approve the June 1, 2011, minutes. A motion was made by Mr. Phillip J. Stoddard and seconded by Mr. Allan R. Pohl to accept the minutes as read. The motion passed unanimously.

Performance

Mr. Jon M. Braeutigam reported on the performance of the SMRS' portfolio for the time period ending June 30, 2011. He reviewed the Mission Statement of the BOI noting that the Bureau invests for beneficiaries. The monies that are invested are for the common good of the beneficiaries, there is no personal gain for the staff, all decisions are made with the beneficiaries in mind. He also noted that investing in Michigan companies, where the risk and return is commiserate with other outside investments, is encouraged in the Investment Act.

Mr. Braeutigam discussed the new *invest*Michigan! Mezzanine fund. This is a $130 million Michigan-based mezzanine fund to be invested in mezzanine debt investment opportunities. This is in partnership with the Small Business Administration, which will provide most of the funding along with Dow Chemical. This entails no new commitments from the Defined Benefit plan. It is believed this will be a win-win program; however, it will take time to invest this money and to realize returns.

Mr. Braeutigam noted the one-year return, which was an amazing 21.7%. This high level of return has not been seen in the last decade. He also noted that all of the public funds had very good returns. The SMRS' three-year number is down about 100 basis points from the peers, of which 70 basis points was due to the sale of $1.1 billion when the S&P was trading at about 700 to de-risk the portfolio and the other 30 basis points was due to the SMRS' asset allocation. He discussed the importance of every asset manager head to be pro-actively assessing the markets going forward. He reviewed the domestic equities where the one-year has been challenging, while the three-year and five-year returns have been good. The small and mid-cap active portfolios are externally managed. The small-cap managers have done well, but the mid-cap managers have underperformed. He noted that alternative investments has had a great run for the decade and that real estate, while it lags the public markets, had a very attractive one-year return. The portfolio is well diversified and has less correlation to the stock market. This has been one method of reducing risk in the portfolio. In international and U.S. stocks, the portfolio managers continue to look for something less correlated to improve the risk-adjusted return of the whole portfolio.

Mr. Braeutigam talked about the bonds returns, which had a great quarter. Bonds are more conservative, which has helped in the three-year and in the five-year returns. Being conservative has been positive in the context of the whole portfolio. The portfolio consists of 14% bonds while peers have 25% bonds. Bonds need to be a little safer as they are insurance on a rainy day. The SMRS' portfolio makes $2.6 billion of payments to beneficiaries every year. He concluded noting that the fiscal year-end calculations the actuary uses to determine employer contributions to the State was at about 13% through the first three quarters of fiscal year 2010-11, with August being down about 5% which puts the SMRS' portfolio at about 8% fiscal year-to-date estimate.

Asset Allocation

Mr. Braeutigam reported on the SMRS' asset allocation. The SMRS portfolio for the time period ending June 30, 2011, had a market value of $51.621 billion. He stated that the majority of the money invested is for the Public School Employees, then a large part for the State Employees, and to a lesser extent the State Police and Judges. The Judges have a fully-funded system mainly because the judges work longer and do not retire at age 50 or 55. He noted that liability management is a very important issue; it is not just about investing, there are $70 billion of liabilities and $51 billion of assets. He discussed U.S. debt, the unfunded liabilities and the fact that there is no way to pay for them. This is not a fun cycle and the books must be looked at seriously with serious decisions to be made, noting that putting these decisions off for the future will only compound the problem and make the situation even worse.

Mr. Braeutigam noted that alternative investments returned, on a net basis, $364 million of cash which along with the $400 million raised by selling fixed income was used to pay benefits of $724 million for the last three months. This is over and above employer contributions. He discussed the asset allocation targets which were decided upon from the asset liability study that was done for the Public School Employees after the early out last year. The liability study will be done for the State Employees after the actuarial reports are completed at the end of the fiscal year. The asset allocation targets are updated every two years. There can be shifts tactically, but not usually directionally or strategically until the new asset allocation is set. He concluded that it is anticipated that there will be an increase in absolute return and the real and opportunistic bucket, which will help to further diversify the equities.

Capital Markets Overview

Mr. Greg Parker began his discussion of the capital markets by looking forward. He explained what can be expected in the capital markets over the next 12 months and used this information as an example of how decisions are made and how the Bureau operates. Going back 12 months, there was a 16% correction in equity markets, it was noted that the economy was still strong and there was talk about a recession, yet it was felt that this talk was unjustified. Overall, it was felt that the equity markets would produce strong results; and when reviewing the performance, the equity markets did exactly that with a 20% return on the S&P 500, mid-caps returned 40%, and real returns had between 25% and 30% returns. He noted that in today's environment the GDP growth is considerably lower than it was 12 months ago and the economy is barely growing at all. The ISM Manufacturing Index 12 months ago was around 60, today it is expected to be around 48. All leading indicators point toward modest, tepid growth, if growth at all. He commented that Europe is being forced to adopt austerity measures, emerging economies are adopting policies to manage capital flows in order to deal with the rising inflation. All this leads to a different economic backdrop today than was witnessed a year ago.

Mr. Parker noted that in the past couple of meetings it was mentioned that the pace of capital appreciation in the public equity markets had been slowing. There was a correction in August indicating that the pace of appreciation is still on a modest to perhaps a downward tract. He reviewed the risk/return profile for fixed income and cash where cash is yielding a negative rate-of-return. When looking at the rate that cash is earning, close to zero, and the rate of inflation, which is over 3%, purchasing power is lost by holding cash. In fixed income instruments, the yields are down, but again the risk of economic growth or contraction is higher. He noted that the public real estate markets have shown some resiliency in the recent downward equity markets. Because of the lag in the real estate markets it is anticipated that the rates-of-return will be high single digits possibly low double digits.

Mr. Parker noted that 12 months from now, it is unlikely that there will be a 21% plus rate-of-return on the fund because the economic backdrop is not conducive to generate the kinds of equity rates-of-returns as was experienced from June 2010 to June 2011. He expressed the belief that the normal rate-of-return of 8% over the next 12 months is an achievable goal stressing that diversification and selectivity will be important; however, it will be the asset allocation that will ultimately drive the 8%.

Economic and Market Review and Outlook

Chairman Sowerby stated in the spirit of time the Economic and Market Review and Outlook will be received and filed.

Investment Reports

Alternative Investments – Mr. Peter Woodford reported on the SMRS' alternative investments. The total market value as of June 30, 2011, was $10,735 million. He noted that the mark-to-marked valuation increased 6.4% for the quarter. The second quarter offered ample opportunity for U.S.-based buyout shops to exit investments through the mergers and acquisitions and IPO market. The record pace of divestitures is a strong indication that sponsors are taking profits off the table. Both high unemployment and macro-economic uncertainty, and the European debt crisis continue to weigh on the market. He noted that the distributions for the second quarter were $711 million, which is a slight decrease from the prior quarter. The distributions for the first half of 2011 versus the first half of 2010, distributions more than doubled. He noted that there were five new commitments made during the second quarter.

Mr. Woodford continued noting that purchase price multiples and equity contributions rose for both mid-market and large-cap deals. Middle market deals and purchase price multiples were around 7.9x EBITDA and large-cap deals were 8.8%x EBITDA. He stated that the recent volatility in the global credit equity markets is unlikely to derail the leverage buyout business, but continued economic weakness will impact deal making and future exits. The objective, going forward, will be to narrow the focus on the best performing managers. It appears this is a very promising market for small and middle market buyout funds and mezzanine debt. The high yield and leverage loan capital markets continue to remain open and on reasonable terms which provides opportunities for maturity extensions, refinancing, and dividend recaps. The distressed debt opportunities have diminished in the U.S.; the wall of debt still exists, but there is ample liquidity and low default levels which indicate there are fewer investment opportunities and lower rates-of-return.

Absolute and Real Return – Mr. Jim Elkins reported on the SMRS' absolute and real return. The market value of the absolute and real return portfolio as of June 30, 2011, was $2,670 million, which was a solid performance. Returns were up 2.75% through year-to-date. However, a difficult July and August resulted in expectations for September being a little more flat. He noted that performance was primarily driven by fixed income arbitrage and event-driven managers. The most significant stress coming from credits of European financials that sold off as a result of the Greek bailout concerns. Convertible arbitrage was down during the quarter as a result of selling pressure that widened the spread of the strategy. Also, noted was the full redemption that was requested from a multi-strategy asset manager that was involved in insider trading in the fall of 2010. This manager was terminated and the multi-strategy fund is expected to wind down sometime after September 30, 2011. He noted that there has been a search for a fund-to-funds manager, the results of that search will be discussed at the December IAC meeting.

Mr. Elkins discussed the enhanced passive commodity strategies which have had a good environment and have continued to significantly outperform the benchmark this year by nearly 125 basis points. He talked about the direct lending strategies where there is approximately $450 million committed at the present time and the possibility of co-investing where there is a need for additional capital. These are high quality, heavy covenant loans, Libor plus 600 loans with the loan duration of about four years. There may be more exposure added for an opportunistic play for the overall portfolio. The ability to make high single digits, low double digits in a lending environment is available because banks and specialty lenders have had to retreat from this space. It was believed that the biggest challenge would be that the banks and specialty lenders may start to come back to the markets; however, they would not be able to deploy capital in a draw down style fund as efficiently as needed to be fully invested. Chairman Sowerby requested that in the December meeting review correlation, fund-to-fund, and the S&P 500.

Active Domestic Equity – Mr. Jack Behar reported on the SMRS' active domestic equity investments. The market value for the active domestic equity holdings as of June 30, 2011, was $17,971 million. He briefly discussed the macro environment where there are a lot of risks. The equity markets continue to look attractive relative to long-term bonds, with the S&P 500 poised to return close to 9.5% over the long term, versus the 30-year Treasury at 4.4%. He noted that there are risks, and the 9% to 10% yields do not come without taking risks. He also noted that large cap stock appear to be undervalued relative to small and mid-cap stocks.

Mr. Behar discussed internal management noting how the combined portfolios are positioned with a mix of attractively valued cyclical and defensive stocks. He noted that from a sector standpoint, the portfolio is overweight the large-cap technology sector. He believes this is a good example of a sector that offers both defense with the attractive balance sheets, solid free cash flow, and very strong growth characteristics relative to the rest of the economy. He noted that this is the strategy used for positioning the portfolio.

Chairman Sowerby requested that at the December IAC meeting Mr. Behar be prepared to discuss the play-to-win strategy attribution analysis on where alpha has prevailed, where it has lagged.

Chairman Sowerby asked since Vinod Khosla is at the meeting and pressed for time, that he be allowed to discuss his presentation before finishing the remainder of the asset class administrators.

Special Presentation – Khosla Ventures – Mr. Vinod Khosla

Mr. Khosla began his presentation by asking the members for specific items that they would like to have discussed. There were several items requested: what are some changes and in what industries and what is in the future for these industries; regulations – how it is encumbering capital formation or growth and is Congress getting in the way of things; hear your view on the different alternative energy technologies – are they cost competitive, what is the future, what will prevail, and what will the world look like; highlights on investments in Michigan made by Khosla Ventures; and venture capital versus your expectations on buyout.

Mr. Khosla discussed the chart provided regarding the green technology portfolio which is divided into four major areas with three sub classes in each area. One has to do with coal, whether it is cleaning up coal or whether it is replacing coal, it is making it better, more cost effective, fundamentally it is about electricity generation. Second is oil. Third has to do with efficiency; electrical efficiency, as in lighting or mechanical efficiency, as in automobile engines. Fourth would be materials. Water is the most basic material and is a pretty important investment theme, but so is the replacement of most chemicals. This is a very broad portfolio.

Mr. Khosla noted some companies head quartered in Michigan in which Khosla Ventures invests. Not included on the list is a new investment just made to Acrom. He discussed a few of the individual companies and the product/service in which the company specializes; they are: Danoteck which makes permanent magnet generators for wind turbines; and EcoMotors which is developing a new engine architecture which NaviStar announced last February they would adopt the EcoMotors engine architecture. He noted the benefits of the new motors which would provide 50% more efficiency, which would cause a shift in trucking and oil consumption and eventually there would be dramatic shifts in world markets. He discussed an example in the shift in technology regarding the use of routers for the Internet. He recommended a book called *Future Babble* by Dan Gardner for anyone in investing.

Mr. Khosla discussed a presentation that was given at Stanford University looking at energy. He noted that he believed most of the forecasts or assumptions about energy 10 to 15 years from now are fundamentally flawed. As an example when Soraa does a light bulb that uses 75% less electricity and has less than a two year payback, it shifts the demand for electricity. He further noted that in trucking, if the engine is not the more efficient engine, no trucker is going to buy it – it is all about cost. He discussed the shift in computers and how some companies did not make the necessary changes and went out of business. IBM shifted from building computers to services, which is their principle business today. He also noted the shift in pharmaceuticals in that at one time the companies were not interested in biotechnology. Today, that is practically the only area in which they invest. He noted that the shifts that result in radical changes are all about tail risk; the financial crisis in 2008 was about tail risk, mis-estimating tail probabilities in energy, the same thing is happening now and of those tail risks many will fail, but the few who do succeed will have a real impact and completely transform these businesses.

He noted an example of what he believes will dramatically transform Michigan. That is: they own a little company which was working on ethanol projects. He received a call from someone in Europe stating everything he was doing in ethanol was wrong. Instead of hanging up, he asked for more details. They informed him that there was a process which would turn wood chips into oil. This was only three or four years ago. The technology has worked out and the company went public about three months ago. This technology changes where the next barrel of oil will come from. Michigan owns four million acres of forest which could be the biggest oil well. He noted the example the small facility in Texas and now there is a second facility in Mississippi. They took pine chips, located in an area where paper mills had shut down and have now created a thriving business. Michigan, taking the paper mills that have shut down or the four million acres of forest, could produce between five and 20 million tons of bio mass a year – approximately 40 million barrels of oil at $100 per barrel. This would also produce forestry jobs and valuable income for Michigan.

He briefly commented on regulation and where to build the first facility for Sakti3, which produces very unique batteries for automotive and other applications, like the iPhone. There have been several offers on the table, one of which is from Germany, and a lot of offers in the United States to build the facility in their area. This is a difficult decision and regulation is part of that decision on the negative side. Some regulations help in markets and some really hurt markets. He discussed the world views of regulations, their benefits and problems. He noted that he views renewable markets as not regulated markets, but ones where you can use regulation to get started.

Mr. Khosla noted that he believes the Internet and mobile world is not done yet and there is a very dramatic acceleration of innovation. There are dramatic shifts going on in retail already. Such as Groupon popped out of nowhere and suddenly customer behavior has changed on how they buy things. People have forgotten that four or five years ago the smart phone did not exist. There has been a shift in the music business; NetFlix is delivering over the Internet to customers. This will be direct competition for HBO.

Mr. Khosla concluded his presentation discussing another area shifting, which is the idea of re-creating the hamburger meat. One would think this is not a big technology market, it is $100 billion market and there is a chance that one can produce it at 1/5th the cost by going directly from plant protein. Taking plant protein like corn, feeding it to cattle and then harvesting the meat this process is about 10% efficient. There is a Stanford professor who is a vegan and decided he wants plant protein to taste as good as beef. He is working on developing a product that tastes as good as the real beef, but is made of plant protein and not soy, you can put it on the grill, cook and eat it, and reduce the cost by 50% of producing beef.

Thank you all very much. I hope I was helpful in answering questions. I apologize, we have to get to California.

<u>Fixed Income</u> – Mr. Paul Nelson reported on the SMRS' fixed income portfolio. The market value of the fixed income portfolio as of June 30, 2011, was $7,123 million. Mr. Nelson stated that Treasuries are near historic lows and spreads are still somewhat wide, but narrowing. There is a high slope to the yield curve. At the present time, one and two year paper is being sold. He noted that within the last month, there was $160 million government sold where the rate-of-return was a little over 1% and this was re-invested at about 3.5%. This does not sound like a lot, but it is a 250 basis points increase. The strategy is being relatively short so that at such time as interest rates go back up, the portfolio will not be substantially damaged thus providing a chance to increase the rate-of-return on the portfolio.

Mr. Nelson discussed the yield curve. The three year was 0.55, the five year was 1.35, the 10 year was 2.82, and the 30 year was 4.12. Reviewing the numbers, if rates go up 1% then your 30-year loses 15% in the market.

<u>Real Estate</u> – Mr. Brian Liikala reported on the SMRS' real estate portfolio. The market value for the real estate portfolio as of June 30, 2011, was $4,765 million. Mr. Liikala noted this is the fifth consecutive quarter of a strong real estate return, from the economic recovery. This is based primarily on appreciation, not necessarily on revenue growth, except in the case of apartments, which are by far leading the way in rent growth. Rents are being increased 10% to 12% in some markets such as Denver and Seattle. Renting is favored over buying.

Mr. Liikala discussed the strategy for the portfolio over the next two years and what the market is going to look like. The portfolio is going to be more actively managed with shorter term investments. The risk must be managed and the move to liquid markets must be made, most of which are major markets with a few secondary markets. Moving toward those markets will help liability needs for the fund. The real estate division will attempt to increase exposure in the West where the portfolio is underweighted by the benchmark and in the mid-Atlantic.

Mr. Liikala noted that the first commitment in Brazil has been made. Investments in China, another emerging market, have done well in the portfolio. The portfolio has always been underweighted in Europe because of unfavorable demographics. He also noted that Brazil has a much better, younger average age group than China, which support real estate growth.

International Equity – The total international equity exposure as of June 30, 2011, was $7,326 million. Chairman Sowerby stated in the spirit of time the international equity report will be received and filed.

Indexed Domestic Equity – The market value of the indexed domestic equity portfolio as of June 30, 2011, was $6,108 million. Chairman Sowerby stated in the spirit of time the indexed domestic equity report will be received and filed.

Basket Clause – The fair market value of the basket clause investments as of June 30, 2011, was $6,508 million or 12.607% of the total portfolio market value of $51.621 billion. Chairman Sowerby stated in the spirit of time the basket clause report will be received and filed.

Next Meeting Date and Adjournment

Chairman Sowerby asked for a motion to adjourn the September meeting. A motion was made to adjourn by Mr. Phillip J. Stoddard and seconded by Mr. Allan R. Pohl. All were in favor. Meeting adjourned at 12:36 p.m.

Approved:

David G. Sowerby

David G. Sowerby, Chairman