BWC Board of Directors
Investment Committee
Thursday, June 26, 2008, 12:00 PM
William Green Building
Neil Schultz Conference Center
30 W Spring St., 2ND Floor (Mezzanine)
Columbus, OH 43215

Members Present: Robert Smith, Chair
Alison Falls, Vice Chair
David Caldwell
James Harris
Larry Price
William Lhota, ex officio member

Other Members Present:
James Hummel
James Matesich
Philip Fulton
Charles Bryan
Kenneth Haffey

Others Present: John Williams, Assistant Attorney General

CALL TO ORDER

Mr. Smith called the meeting to order at 12:00 pm and the roll call was taken. All committee members were present.

MINUTES OF MAY 28 AND MAY 29, 2008

Motion was made by Mr. Harris, and seconded by Mr. Price, to approve the May 29, 2008 minutes. Bruce Dunn, Chief Investment Officer, indicated that the word decline was repeated on page three. Mr. Dunn further noted that in the CIO report section, Fraser Mega, should read Fraser Nega. Ms. Falls inquired as to whether Mercer Consulting had been supplied with a copy of the minutes for review. Mercer Consulting has been supplied with a copy of the minutes and acknowledged review of the minutes. Roll call was taken and the motion passed unanimously. With regard to the May 28, 2008 minutes, approval shall be deferred to the July 2008 meeting.

Discussion was made concerning a brochure titled "Developing an Investment Policy Statement." Ms. Falls emphasized the importance of noting that the Bureau currently has an investment policy statement that is in the process of being revised. Members of the Committee asked whether revisions could be made to the brochure. Administrator Ryan confirmed that the brochure had been printed in-house, and further revisions could be made. The Committee agreed to review the document and make suggestions for change.

The Committee discussed the Bureau's transition process to achieve compliance with the Investment Policy Statement. Mr. Dunn noted that in terms of policy, the Bureau has not moved towards active management of the funds. He recommended that the Bureau's investment consultant be permitted first to complete its asset liability allocation study. The Committee discussed whether it should be recommended that the prior targeted asset allocation transition process be suspended or whether the Bureau should delay implementation in order to allow the asset allocation study to be completed. Ms. Falls noted that there needs to be an acknowledgment that review of the Investment Policy Statement is underway.

NEW BUSINESS / ACTION ITEMS

Proposed Alternative Investment Options for Public Work-Relief Employers' Fund and Marine Industry Fund

Regarding this agenda item, Mr. Dunn began by discussing passive and active management of investments. Mr. Dunn referred to two handouts presented to the Investment Committee. With regard to passive management, there are two choices: separate account management and commingled account management. The client has more control with separate account management. In addition, a separate account arrangement would permit a client to avoid the use of derivatives. However, a separate account arrangement would be costly and inefficient for the management of relatively small investment funds, such as the Public Work-Relief Employers' Fund and the Marine Industry Fund. Economies of scale are better achieved for a fifteen million dollar fund and a twenty two million dollar fund with a commingled account structure. Further, the fees for a separate account structure would be excessive for such small funds. Barclays had been recommended and approved for commingled account management of the two small aforementioned funds. This has not been finalized as a consequence of securities lending with the utilization of derivatives by Barclays in a commingled account structure, and concerns over whether this would be out of compliance with the Bureau's Investment Policy Statement. Mr. Dunn noted that a separate account management arrangement is not viable for small funds. Mr. Dunn then presented three alternative actions to be considered by the Investment Committee for the two aforementioned funds per his memorandum dated June 13, 2008: (i) Barclays as investment manager, (ii) State Street as investment manager, and (iii) maintain current interim strategy until an investment strategy is presented by Mercer upon conclusion of thier asset-liability. Although their fund management policy permits the use of derivatives in their commingled accounts, State Street has never exercised their right to use derivatives. The Bureau Investment Policy Statement would need to permit the use of derivatives if the Bureau makes the decision to utilize a commingled account arrangement with State Street. In addition, there will be further evaluation of the options while maintaining a one hundred percent investment allocation to the JP Morgan US Government Money Market Fund.

Guy Cooper of Mercer Consulting indicated that a great deal of work will be involved with returning to the beginning of the evaluation process, and widening the net for evaluating more investment alternatives. Mr. Smith asked Mr. Dunn for his recommendation to the

Investment Committee. Mr. Dunn recommended consideration of a commingled account structure with State Street or Barclays with consideration of the use of derivatives. Mr. Dunn offered a preference for State Street at this time given the current Investment Committee sentiment on derivatives use since State Street does not actually employ the use of derivatives in the management of its passive indexed commingled fund offered. Ms. Falls noted her belief that the use of derivatives to hedge is sound investment policy. However, she stated she is not comfortable pursuing action that requires amendment of policy without the group's complete understanding of the change. Ms. Falls emphasized a thorough evaluation of other alternatives for fund managers was her preference. Mr. Smith sought clarification from Assistant Attorney General John Williams as to whether or not revision of the Investment Policy Statement would be required to utilize State Street. Mr. Williams stated yes, the policy would need to be revised to permit the use of derivatives. Mr. Price inquired as whether or not a contract with State Street would allow derivatives. Kristin Finney-Cooke of Mercer Consulting replied that the agreement with State Street would require the Bureau to permit the use of derivatives. Mr. Price asked if a contract could be terminated if State Street began to use derivatives. Mr. Dunn and Ms. Finney-Cooke replied that a contract could be ended under those circumstances. Mr. Smith asked if a policy statement revision regarding the use of derivatives could be specific to the investment manager. Mr. Cooper and Ms. Finney-Cooke indicated that the Investment Policy Statement could be revised so as to limit the provision to a specific manager. Ms. Finney-Cooke discussed the Securities and Exchange Commission investigation of State Street with regard to their active investment management. Mr. Dunn noted that there have been no issues with State Street's passive management team.

Mr. Caldwell indicated that since the Bureau staff and Mercer Consulting can be watchful on the use of derivatives, his comfort level with the use of derivatives has increased. Ms. Finney-Cooke stated that Board education on derivatives would be useful. Mr. Harris inquired as to why Mr. Smith and Ms. Falls had differing opinions on the use of derivatives. Mr. Smith has a pragmatic approach to the issue, while Ms. Falls has a policy based approach to the issue. Mr. Cooper discussed securities lending, and the underlying risk associated with securities lending. State Street is more conservative than Barclays with regard to cash collateral pool investment guidelines pertaining to securities lending. Mr. Cooper recommended opening up the request for quote (RFQ), and investigating whether there are additional options for the Bureau to use for a commingled passive management approach. Mr. Smith inquired as to the timeline for the reissuance of an RFQ. Mr. Dunn indicated that the RFQ timeline process from issuance to manager recommendation could be approximately two months. Mercer Consulting will explore options and report back at the July meeting to the Investment Committee on the advisability of reissuing an RFQ.

According to Mr. Williams, the April 2008 vote to utilize Barclays needs to be reconsidered. Mr. Smith indicated that since the Investment Committee received information from Bureau investment staff on derivatives use by Barclays in its management of the cash collateral securities lending pool used by the commingled fund applicable to the Bureau, the Investment Committee shall reconsider the possibility of using Barclays. Ms. Falls discussed transitional implementation issues.

RFP for Commingled Passive Index Managers

The Committee discussed Mr. Dunn's recommendation to delay issuance of the RFP for commingled passive index managers for the State Insurance Fund, the Disabled Workers' Relief Fund and the Coal Workers' Fund until such time as Mercer Consulting can provide investment strategy recommendations in coordination with the Deloitte actuarial study. Motion was made by Ms. Falls, seconded by Mr. Harris, as follows: that the Investment Committee of the Workers' Compensation Board of Directors recommend to the Board that it delay the issuance of Requests for Proposals (RFPs) for commingled passive indexed investment managers, previously approved by the Board in May 2008, for the reasons set forth in the memorandum of the Bureau's Chief Investment Officer dated June 13, 2008, and to allow consideration of revisions to the Statement of Investment Policy and Guidelines. Roll call was taken and the motion passed 6-0.

DISCUSSION ITEMS

Monthly and Fiscal Year to Date Portfolio Value Comparisons

Discussion was made by Mr. Dunn concerning portfolio values. A handout was included in the presentation, and is incorporated by reference into the minutes. May of 2008 was a poor month for the performance of bonds. There was a negative 1.5% return for bonds for the month, while S&P 500 indexwhile equities increased 1.3%. Mr. Dunn indicated the overall portfolio return for the Bureau for the fiscal year to date ending May, 2008 was between 5-6%.

Portfolio Performance

A presentation was made by Mercer Consulting on the first quarter performance of 2008. A handout was included in the presentation, and is incorporated by reference into the minutes. Ms. Finney-Cooke presented on such performance issues as the economic environment, market return, performance summary, etc. With regard to the performance of the equity market, there was negative performance in the first quarter. Mr. Price inquired as to how close Ms. Finney-Cooke believed the economy was to a recession. Ms. Finney-Cooke replied that a recessionary economy cannot be determined until the economy is in it. Ms. Finney-Cooke discussed fixed income performance. There was high performance for TIPS. This is good for the Bureau since the Bureau is invested heavily in TIPS. International equity markets performed poorly, but the Bureau has no exposure to that market sector.

Discussion was made of the performance summary for the total portfolio, including benchmark comparisons. Mr. Smith inquired as to which managers drove underperformance. Ms. Finney-Cooke indicated this was difficult to track, as there is only a ten basis points difference when looking at underlying managers. Discussion was made of the format for future performance reports and changes they will reflect. A critical inquiry involves how the Bureau is doing in relationship to asset classes invested by the various managers. Mr. Lhota would like to see graphs and slides for future reports.

CIO Report – May 2008

Mr. Dunn provided the Board with highlights from his report, which is incorporated by reference into the minutes. There has been one additional private equity sale that closed in May 2008. There is one more private equity sale remaining to be completed. Mr. Dunn noted that he has completed the application process for renewal to be licensed as Bureau chief investment officer under Ohio Revised Code requirements. An annual financial disclosure statement has been submitted to the Ohio Ethics Commission by each of the unclassified exempt members of the Investment Division.

ADJOURNMENT

Upon motion by Ms. Falls, seconded by Mr. Caldwell, the meeting was adjourned at 2:00 pm. Roll call was taken, and the motion passed 5-0. Mr. Lhota was not present for the roll call.

Prepared by Tom Woodruff, BWC staff counsel.

MERCER

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Memo

To: Investment Committee
Ohio Bureau of Workers Compensation (Ohio BWC) Board of Trustees

Date: July 15, 2008

From: Guy Cooper
Kristin Finney-Cooke
Kweku Obed

Subject: **Intermediate Fixed Income Index Manager Search**

Background

The Ohio BWC is looking to entrust the assets of the Public Worker's Relief Fund (PWRF) and the Marine Insurance Fund (MIF) to a suitable intermediate fixed income index manager. As of May 31, 2008, the PWRF had approximately $22.5 million in assets while the MIF had around $16.7 million in assets.

Mercer has offered to research the alternatives for an appropriate fixed income index manager. To be acceptable, the fixed income manager must offer a product that either does no securities lending or engages in securities lending but is prohibited from using derivatives in their securities lending program.

Mercer's Screening and Search Process

Mercer examined its proprietary Global Investment Manager Database (GIMD) for possible intermediate fixed income index managers.

- The GIMD database contains information on 18,700 investment products, of which 1,567 constitute fixed income strategies.
- 140 of the 1,567 fixed income strategies were intermediate duration fixed income strategies.
- Of these 140 strategies, 17 strategies were passively managed.
- After excluding State Street, Northern Trust, and Barclay's, we were left with a list of 9 passively managed intermediate fixed income strategies.

- We then contacted these 9 candidates to determine their use of derivatives. 4 funds survived this final cut. These 4 candidates, shown in the table below, either do not do securities lending or are specifically prohibited from using derivatives.

Manager Name	Strategy Name	Security lending	Vehicle Type	Applicable Fee
Hughes Capital Management	Intermediate Govt./Corp	No	Segregated	3 bps
BNY Asset Management	Intermediate Govt/Credit	Client by client basis	Segregated	8bps
JKMilne Asset Management	JKMAM Index Intermediate Gov/Credit Composite	No	Segregated	9bps
Standish	Yield Enhanced Strategy	Yes	Institutional Pooled Fund	10bps

Conclusions

- Mercer research does not consider any of these firms top-tier fixed income passive managers and devotes no active research effort to these passive products.

- Two of these firms are units of BNY/Mellon Asset Management. The original Mellon Group is a top tier index fund provider. Their affiliates BNY and Standish are not quite at that level. We would want to determine which groups within the Mellon complex offers the BNY and Standish products before deciding whether to proceed.

- We believe it likely that the best course of action in the long term is for the Board of Trustees to consider modifying the current investment policy guidelines to permit the conservative and controlled use of derivatives, thus allowing the use of top tier commingled index fund providers such as State Street and BGI.

Ohio Bureau of Workers' Compensation
Invested Assets Market Value Comparison
TOTAL FUNDS

Asset Sector	Market Value June 30, 2008	% Assets	Market Value May 31, 2008	% Assets	Increase(Decrease) Prior Month-End	% Change	Market Value June 30, 2007	% Assets	Increase (Decrease) Prior Fiscal Year-End	% Change
Bonds	13,917,829,156	79.9%	13,750,594,500	77.3%	167,234,656	1.2%	$13,506,132,582	80.1%	411,696,574	3.0%
Equity	3,182,331,834	18.3%	3,477,639,650	19.5%	(295,307,816)	-8.5%	3,094,056,499	18.3%	88,275,335	2.9%
Net Cash - OIM	31,217,754	0.2%	76,036,784	0.4%	(44,819,030)	-58.9%	16,853,230	0.1%	14,364,524	85.2%
Net Cash - Operating	194,988,426	1.1%	388,582,114	2.2%	(193,593,688)	-49.8%	200,337,474	1.2%	(5,349,048)	-2.7%
Net Cash - MIF, PWRF, SIEGF	95,980,364	0.6%	97,036,813	0.5%	(1,056,449)	-1.1%	47,788,060	0.3%	48,192,304	100.8%
Total Net Cash	322,186,544	1.8%	561,655,711	3.2%	(239,469,167)	-42.6%	264,978,764	1.6%	57,207,780	21.6%
Total Invested Assets	$17,422,347,534	100%	$17,789,889,861	100%	($367,542,327)	-2.1%	$16,865,167,844	100%	$557,179,690	3.3%

OIM: Outside Investment Managers
MIF: Marine Industry Fund; **PWRE**: Public Work-Relief Employees' Fund; **SIEGF**: Self-Insured Employers' Guaranty Fund

Market Value of Bonds and Stocks includes accrued investment income.

Net Cash includes the impact of net trade receivables/payables, accrued money market earnings, and accrued investment manager fees.

June/May 2008 Comparisons

- Net investment income in June 2008 was a negative $171 million representing a net portfolio return of -0.96% (unaudited).
- Bond market value increase of $167.2 mm comprised of $79.8 mm in interest income, $42.1 mm in net realized/unrealized gains and $45.3 mm in OIM net bond purchases (reducing net cash balances accordingly).
- Equity market value decrease of $295.3 mm comprised largely of $6.2 mm of dividend income, ($299.2) mm in net realized/unrealized losses and $0.5 mm in higher OIM net cash balances.
- Net cash balances decreased $239.5 mm in June 2008 largely due to decreased OIM cash balances ($44.8mm) and decreased operating cash balances ($193.6mm).
  JPMorgan US Govt. money market fund had 30-day average yield of 2.20% for June 2008 (2.25% for May08) and 7-day average yield of 2.23% on 6/30/08 (2.27% on 5/31/08).

June 2008/June 2007 FYTD Comparisons

- Net investment income FYTD of $717 million comprised of $877 mm of investment income and ($146) mm of net realized/unrealized losses, offset slightly by $14 mm in fees.
- A total of $588 mm FYTD has been shifted from Bonds to Equities due to ancillary fund portfolio transitions ($283 mm) and portfolio rebalancing actions ($305 mm).
  An additional $201 mm FYTD was shifted from Bonds to Cash to fund operating expenses ($164 mm) and to execute two ancillary fund portfolio transitions ($37 mm).
- Bond market value increase of $412 mm comprised of $787 mm in interest income and $421 mm of net realized/unrealized gains, reduced by $789 mm in redemptions (see preceding bullet) and $7 mm in higher OIM cash balances.
- Equity market value increase of $88 mm comprised largely of $64 mm in dividend income and $588 mm inflow from transitions/rebalancing, reduced by $567 mm in realized/unrealized losses.

BWC Board of Directors
CIO Report June, 2008
Investment Division
Bruce Dunn, CFA, Chief Investment Officer
July 11, 2008

The Investment Division in June, 2008 continued to work on important investment initiatives. This report summarizes some of these activities, issues and action plans relating to the Ohio Bureau of Workers' Compensation Investment Division.

Fiscal Year 2008 Goals

The Investment Division has six major goals for fiscal year 2008. These goals are the following:

1. Execute and complete transition of BWC portfolios per new BWC Investment Policy
2. Complete establishment of new BWC Investment Division
3. Assist in establishment of new investment accounting system
4. Sell all 68 private equity funds
5. Establish proper investment controls and compliance procedures
6. Provide enhancement of knowledge to new BWC Board of Directors and Investment Committee

Strategic Goal One – PORTFOLIO TRANSITION

A pool of three Transition Managers (Barclays, Russell, State Street) were approved by the former Workers' Compensation Oversight Commission (WCOC) at its September 28, 2006 meeting. At the discretion of the BWC Investment Division, these transition managers are selected to oversee and effectively manage one or more of the many specific asset class exchanges in fulfillment of the goals of the new BWC Investment Policy. The new Investment Policy was approved at the July 20, 2006 WCOC meeting for State Insurance Fund assets and at the September 28, 2006 WCOC meeting for the assets of the BWC ancillary trust fund portfolios. At the time of this approval, most invested assets of the State Insurance Fund and all assets of four ancillary trust funds (except operating cash) were invested in bonds in a customized commingled fund passively indexed managed to the intermediate-duration Lehman Aggregate benchmark index.

The State Insurance Fund (SIF) had approximately $14.8 billion of investment assets involved in transitions to achieve its portfolio asset allocation and portfolio duration targets as per the new BWC Investment Policy. The State Insurance Fund asset transitions occurred over two stages between January, 2007 and April, 2007. These SIF asset transitions involved invested assets being sold, reinvested and transferred to respective approved passive indexed managers under the oversight and management of the respective transition managers chosen. Each such transition was very closely monitored by the BWC investment staff.

The transition of approximately $1.4 billion of assets involving four ancillary funds was completed in two distinct stages in July, 2007 and September, 2007. The first stage of the ancillary fund transitions involved invested assets totalling $21.4 million for the Ohio Public Workers Relief Fund (PWRF) and $15.2 million for the Ohio Marine Industry Fund (MIF). These assets were transitioned in July, 2007 to the JPMorgan U.S. Government Money Market Fund. This money market fund serves as the current interim investment strategy for these two smaller ancillary funds.

The second stage of the ancillary trust funds asset transition strategy involved the transitioning of invested assets of the two large ancillary trust funds, the Disabled Workers Relief Fund (DWRF) and the Coal Workers Pneumoconiosis Fund (CWPF). These two trust fund transitions totaled approximately $1.38 billion in invested assets, comprising approximately $1.14 billion for DWRF and $240 million for CWPF. These respective trust funds were transitioned in September, 2007 to three respective asset class mandates per the Investment Policy targeted asset class allocation. Similar to the SIF portfolio, these assets were all targeted to approved passive indexed managers.

As the result of the approval provided by the Board of Directors on November 21, 2007, all assets of PWRF and MIF totalling over $38 million, other than operating cash requirements, are anticipated to be transitioned to a commingled pooled intermediate duration bond fund indexed to the new intermediate duration fixed income benchmark also approved by the Board of Directors at the November, 2007 meeting. At the April, 2008 meetings of the Investment Committee and Board of Directors, an investment manager (Barclays) was recommended and approved for these two ancillary funds upon the completion of the RFQ review and selection process. Upon the CIO learning in early May of the utilization of certain derivative asset classes in the related securities lending cash collateral pool managed by Barclays that are prohibited per the current BWC Investment Policy Statement, this decision is being reassessed after discussion of this matter at both the May and June, 2008 Investment Committee meetings. The investment strategy of the PWRF and MIF portfolios will be addressed further at the upcoming July, 2008 Investment Committee meeting.

Strategic Goal Two – BUILD INVESTMENT STAFF

The Investment Division began fiscal year 2008 commencing July 1, 2007 with a staff of seven individuals consisting of the CIO, Director of Investments, two Senior Investment Managers, two assistant Investment Managers and an administrative assistant. Two new additions to staff occurred in late July, 2007 with the hiring of an Investment Administration Manager and an Assistant Investment Manager. Both of these more recent hires are making many contributions.

One of the two Senior Investment Managers who was on staff at the start of fiscal year 2008 is no longer a member of the Investment Division team, effective November 9, 2007. To fill this vacancy, one of the Assistant Investment Managers was offered and accepted the new position of Investment Manager. Two new additions to staff occurred in March and April of 2008 with the hiring of a new Assistant Investment Manager and an Administrative Assistant. An additional new Senior Investment Manager position was intended to be filled by the end of the first quarter of 2008. The clear leading candidate for the new Senior Investment Manager position initially accepted the Investment Division employment offer in late January, 2008 but retracted such acceptance in late February, 2008 to accept an alternative employment offer. The Investment Division subsequently reposted this Senior Investment Manager position in March. First stage phone interviews with selected candidates for this important position commenced in June.

The necessary increase in positions of the BWC investment staff reflects the next stage of the building of a team of experienced investment professionals dedicated to serving the needs of the BWC and its customers with the highest of integrity and competence.

Strategic Goal Three – NEW INVESTMENT ACCOUNTING SYSTEM

A RFP process that began in November, 2006 for a new investment accounting and reporting system resulted in the selection of an integrated outsourced vendor solution offered by BNY Mellon. BWC has now completed the accounting conversion process and is currently in the process of completing the full implementation process to this web-based system. The BWC Investment Division is focusing on the goal to have an improved accounting system available to the investment staff to accommodate the effective daily monitoring of both passive and active style asset managers in satisfaction of the current BWC Investment Policy. The investment staff is now well into the process of learning how to utilize many of the analytical, compliance and performance measurement tools and resources offered by this accounting system through both formal training sessions and self education. Certain individuals at Mercer Investment Consulting are now being utilized by the Investment Division to assist in the education and implementation of analytical and compliance tools available. The transition of all performance data from Wilshire Associates to Mercer has been completed. Mercer was able to present a first quarter 2008 performance report to the Investment Committee and other members of the Board of Directors at the June, 2008 Investment Committee meeting.

Strategic Goal Four – PRIVATE EQUITY SALE

The sale of one additional private equity partnership occurred in May for total proceeds of $5.1 million. At the end of June, a total of 66 private equity partnerships have been sold by BWC for total proceeds of

$399.0 million. All such proceeds received from private equity partnership sales are reinvested in the passive indexed Large Cap S&P 500 Equity portfolio managed by Northern Trust. The Investment Division is working with the BWC contracted sales agent UBS towards the goal of selling the last remaining private equity partnership currently retained. The book value of this remaining private equity partnership to be sold is currently $2.0 million

As mentioned in the April, 2008 CIO Report, the Axxon Capital partnership was converted in April to a limited liability corporation. This LLC investment with a current book value of $1.2 million is now being liquidated by the Bureau by means of actual liquidation of its remaining assets rather than by third party sale. A significant distribution of cash is expected to be received soon from Axxon Capital LLC.

Strategic Goal Five – INTERNAL INVESTMENT PROCEDURES

The Internal Audit Division is providing guidance and assistance in both the creation and further improvement of proper procedures and controls for the Investment Division. This is important as the Investment Division selects and very closely monitors existing and new investment managers who will manage specific mandates reflected from the new Investment Policy approved.

The Investment Division has focused on the management oversight of the passive style investment managers, performance reporting, and other investment activities to support the Investment Policy. Internal procedures for the monitoring of active style investment managers will be developed well in advance of the selection of such managers.

Strategic Goal Six – BOARD OF DIRECTORS KNOWLEDGE ENHANCEMENT

An added goal of the Investment Division is to provide investment-related fundamental training to the new BWC Board of Directors. Such training will assist the Board of Directors in carrying out its fiduciary responsibilities to the BWC trust funds. The Investment Division will provide educational presentations (written and oral) on relevant topics at scheduled public meetings. The Investment Division will also provide training through informal discussion, as appropriate under the Ohio Sunshine Laws. The CIO and Director of Investments encourage Board members to contact them with inquiries, comments or concerns.

At the September, 2007 meetings, there were formal presentations made by the Investment Division on (i) the fundamentals of investments as relevant to the BWC portfolio of assets and current investment strategy, (ii) the BWC RFP process for securing external investment management services/products, and (iii) the advantages/disadvantages of the two types of alternative custodial structures for investment asset management. The BWC RFP process for securing a full service investment consulting firm and the roles of an evaluation committee in the RFP process was addressed in the October meetings. Discussion on the fundamentals of securities lending was started in the November meeting and was continued and concluded at the December meeting. With consultation of the Investment Division and the Administrator, Mercer has commenced in May, 2008 a series of monthly educational presentations on important investment topics. These educational presentations will be beneficial when Mercer later presents recommendations on proposed new investment policy.

Investment Staff Compliance and Certification

Ohio Revised Code requires the BWC Chief Investment Officer to be licensed as Bureau chief investment officer by the Ohio division of securities in the Department of Commerce. It also requires such chief investment officer to have the CFA designation. The current BWC chief investment officer has fulfilled these Ohio Revised Code requirements and his license to serve as Bureau chief investment officer was officially renewed on June 30, 2008.

Compliance

The investment portfolios in the aggregate were in compliance with the BWC Investment Policy at the end of June, 2008. BWC Investment Policy Statement compliance rules have been built into the Mellon compliance monitoring system sufficiently at this time such that the Mellon system was very useful in monitoring portfolio compliance for June.

12-month Investment Committee Calendar

Date	Month / Agenda	Notes
	January	
1/22/09	1. Investment Consultant Asset/Liability Report and recommendation, possible vote	
	February	
2/19/09	1. Investment Consultant Performance Report 4Q08	
	March	
3/19/09		
	April	
4/29/09	1. Annual Investment Committee Charter Review	
Date	**May**	
5/28/09	1. Investment Consultant Performance Report 1Q09	
	June	
6/18/09		

Asset and Liability Matching –

July 24, 2008

ALM – Asset and Liability M…

- ALM can mean:
- Asset and Liability Modeling – a computer exercise of determining how assets and liabilities behave in the future in various scenarios
- Asset and Liability Management – the general practice of paying attention to how both assets and liabilities behave
- Asset and Liability Matching – one of several approaches to matching assets to liabilities in a attempt to managing surplus

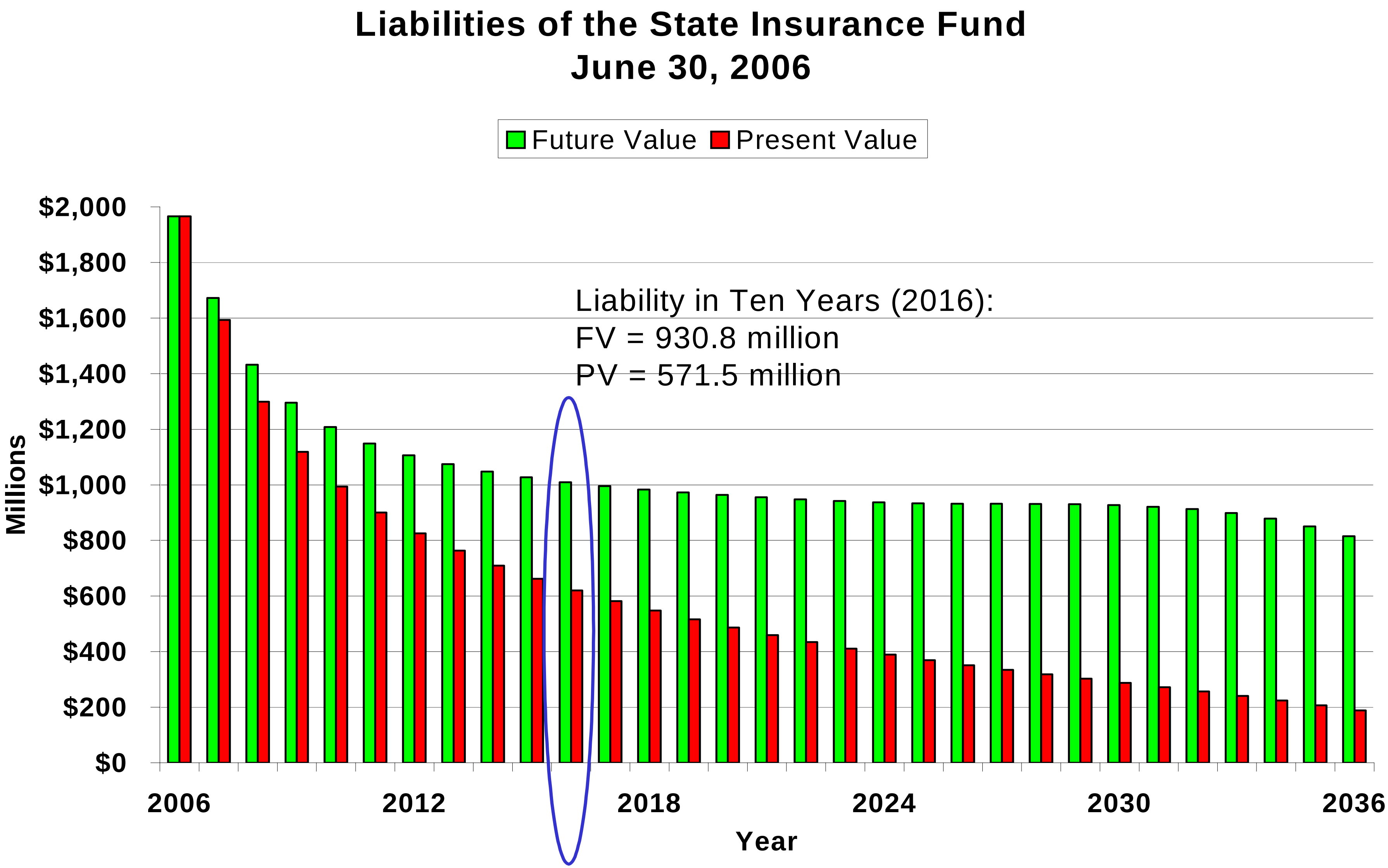
Definition – Liabilities (1/2)

- Liabilities are the payments the Bureau must make in every future year.
- Liabilities are mainly workers' compensation claims. Oliver Wyman estimates these at the end of the June 30th fiscal year. These estimates are the anticipated lifetime payments for injuries known to have occurred by that June $30^{th.}$
- Workers' compensation claims for injuries that will occur in the future (after June 30^{th} of the current year) are not included in the Oliver Wyman estimates
- Every June 30^{th}, the Bureau assesses premiums from employers. These premiums are designed to cover the lifetime costs of injuries that occur in the next 12 months.
- On any given June 30^{th}, the assets the Bureau has are meant to cover the injuries that have already occurred. The new premiums are meant to cover injuries that have not yet occurred but will occur in the future.

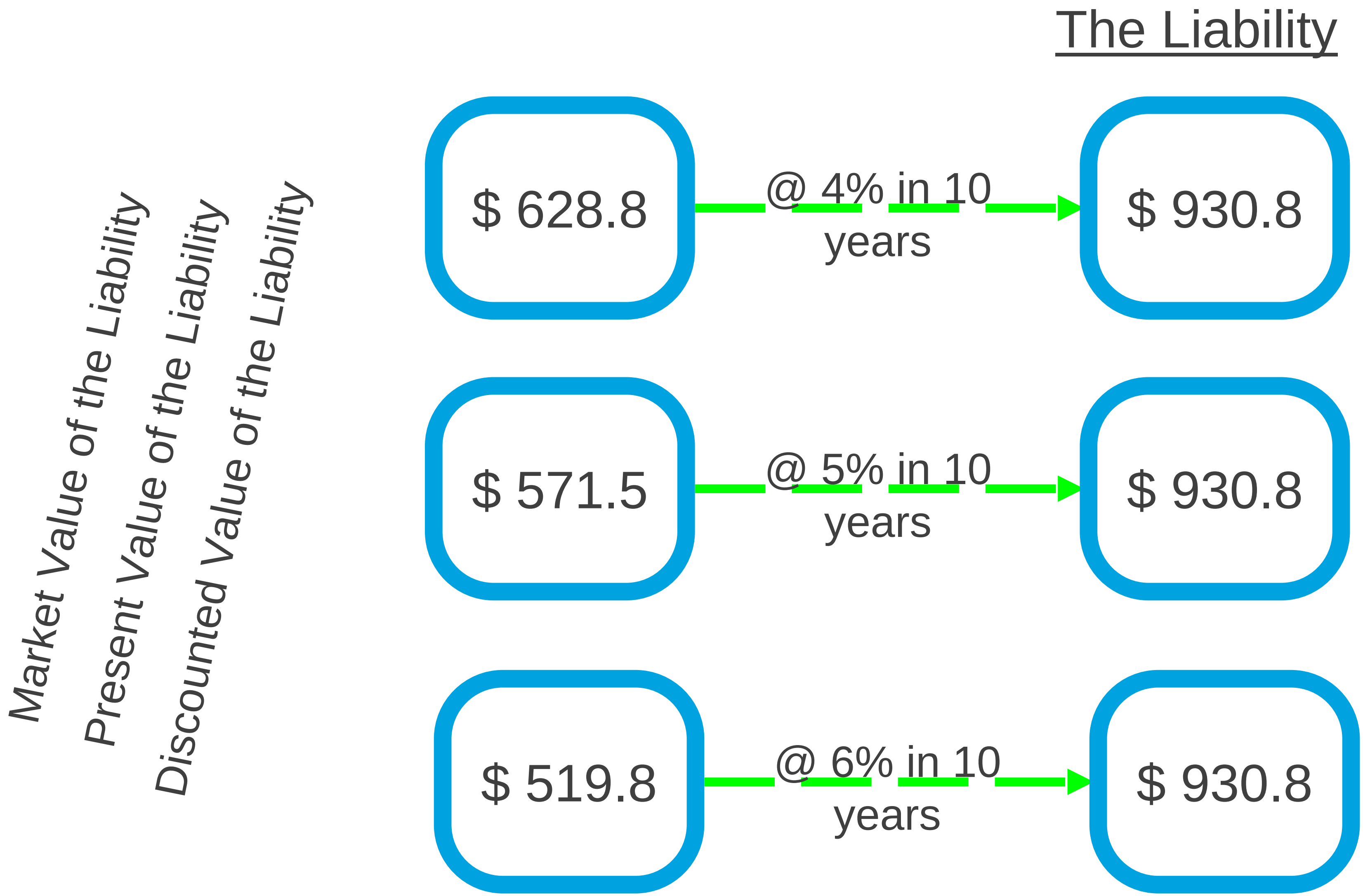
Definition – Liabilities (2/2)

- Note that future liabilities are not known with certainty and must be estimated.
- Some of the future estimated amounts of the Bureau's liabilities are subject to medical inflation. Oliver Wyman assumes that medical inflation is 8% in the first year and 9% in the 29 years thereafter.
- The costs of operating the Bureau are another liability of the Bureau, and many of these are provided for by a separate fund – the Administrative Cost Fund.
- We speak of the stream of liabilities because there is liability every year in perpetuity.
- Managing the assets to eet the stream of liabilities is one of the central tasks of governing the Bureau.

Liabilities of the State Insurance Fund



The Market Value of Liabilities



The Fundamental Theorem of Asset and Liability Matching

To achieve a theoretically perfect guarantee of meeting a future expected payment:

1. Determine the market value of your liability
2. Buy a bond in the dollar amount of the market value of the liability that has the same duration as the liability

You thus MATCH the value of your asset to the value of your liability and the duration of your asset to the duration of your liability.

Market Value of Assets = $571.5 Market Value of Liabilities = $571.5

When Market Value of Assets = Market Value of Liability for the 2016 Liability

- Four things will happen:

1. You are assured of having $ 930.8 million dollars at the end of ten years to pay the liability.
2. You are immune and indifferent to changes in the level of interest rates.
3. You are also immune and indifferent to changes in the stock market.
4. Surplus for this ten year liability begins at zero and remains unchanged at zero no matter what happens to interest rates.

Surplus and Surplus Management

- Surplus equals Assets minus Liabilities.
- Surplus is the amount of money not needed to pay the liabilities.
- If either Assets or Liabilities change, Surplus changes
- To manage Surplus, both Assets and Liabilities must be managed. It is not enough to just manage the assets.
- Reasons for managing Surplus:

1. If Surplus is currently negative, you might want to manage to increase it.
2. If Surplus is currently positive, you might want to manage to protect it.
3. You might want to achieve and maintain a target level of Surplus.

ALM and Surplus Management

- ALM inherently requires the use of bonds. The more bonds you have, and the better your bonds match the duration of your liabilities, the more assets will go up and down in parallel with the value of liabilities. This stabilizes Surplus.
- The more stocks you have, the less your assets will behave like your liabilities and the more volatile Surplus will be. But you will have to accept this Surplus volatility if you want to increase Surplus.
- The risk of accepting Surplus volatility is that Surplus will in fact decrease if stocks fall in value.

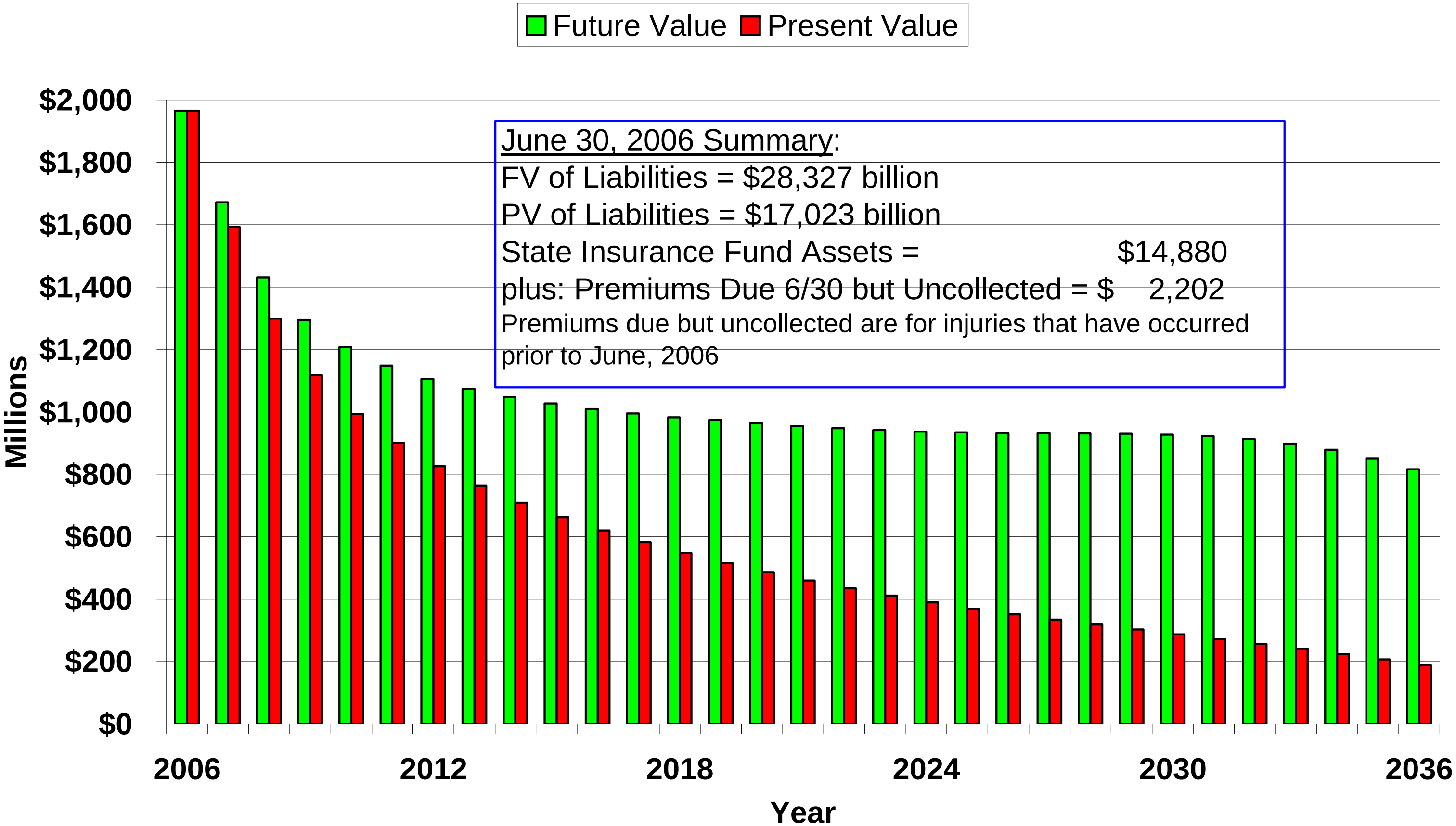
ALM in practice

- A number of real world complications arise in achieving the perfect asset and liability match.
- A future liability is not known with certainty. Estimates of what the liability may be might be wildly off, particularly if the future liability is subject to a high degree of uncertainty such as medical inflation.
- Typical coupon bonds do not have durations over 15. To match long liabilities we must use exotic instruments or U.S. Government zero-coupon bonds.
- ALM is expensive. This is because ALM relies on bonds which we expect to earn less than other asset classes, particularly stocks. In effect, ALM purchases safety and certainty at an expensive price.
- The theory of duration-matching makes several assumptions, which may not hold in practice: parallel shifts in yield curves, small changes in yields only, bonds cannot be called and do not contain other optionality.

ALM for the BWC

- How are we going to define surplus?
- The BWC does not mark its liabilities to market as interest rates change (or they do so to a limited degree). This is a consequence of the discount rate that is fixed for a twelve month period and perhaps of the actuarial smoothing of liabilities.
- With liabilities largely fixed, managing surplus at the Bureau is equivalent to managing assets. There is arguably no need or role for an asset strategy that tries to mimic the volatility of the liabilities.
- We have asked Deloitte to consider these questions of surplus management, and we will discuss what the role of ALM for the BWC should be when their report is completed.

Liabilities of the State Insurance Fund
June 30, 2006



Medical Inflation (1/2)

- On June 30 , 2006, the present value of the 30 year liability of the State Insurance Fund at a 5% discount rate was $17.023 billion. This assumed medical inflation of 8% in 2006 and 9% in each of the 29 years thereafter.
- The Table shows the present value of the 30 year liability of the State Insurance Fund at a 5% discount rate for other assumptions about medical inflation.

Medical Inflation (2/2)

	Medical Inflation		
	Medical Inflation Assumption	Present Value of Liability	Additional Liability Relative to Baseline
Baseline	9%	$17,023	
	10%	$17,767	$744
	11%	$18,631	$1,608
	12%	$19,638	$2,614
	18%	$30,619	$13,595
	8%	$16,381	($643)
	7%	$15,824	($1,199)
	5%	$14,917	($2,107)
	0%	$13,449	($3,574)

Numbers are in millions