

The background of the slide features the official seal of the State of Wyoming. The seal is circular with a rope-like border. Inside the border, the words "SEAL OF THE STATE OF WYOMING" are written in a circular path. The central part of the seal depicts a landscape with a mountain range in the background. In the foreground, there are two figures: on the left, a person on horseback holding a rifle, and on the right, a person on horseback holding a pitchfork. Between them is a large, open book. Above the book, the words "LIVESTOCK" and "MINES" are written. At the bottom of the seal, the years "1869" and "1890" are visible.

**STATE OF WYOMING'S
INVESTMENT PORTFOLIO:**

AN OVERVIEW OF STRATEGIES

Wyoming State Treasurer's Office

&

RV Kuhns & Associates

consultant to the
Wyoming State Loan and Investment Board

March 2008

STATE OF WYOMING'S INVESTMENT PORTFOLIO: AN OVERVIEW OF STRATEGIES

FIXED INCOME

<u>The Broad Fixed Income Market</u>	
Treasuries, Agencies, Corporates, Mortgages-backed Securities, Asset-backed Securities	1
<u>The "Core-Plus" Sector</u>	
Below Investment Grade (High Yield), Foreign Debt, Emerging Market Debt (EMD)	2
<u>External Fixed Income Managers: Corporates</u>	
Logan Circle Partners, Western Asset Management (WAMCO)	2
<u>External Fixed Income Managers: Mortgages</u>	
Pacific Investment Management Company (PIMCO), JP Morgan	2
<u>External Fixed Income Managers: Core-Plus Managers</u>	
WAMCO, Lehman Brothers, PIMCO	3
<u>External Fixed Income Managers: Global</u>	
PIMCO	3
<u>Convertibles</u>	
Nicholas Applegate	4

EQUITIES

<u>Large Cap US Equity</u>	
State Street Global Advisors	4
<u>Small / Mid Cap US Equity</u>	
GAMCO Investors, Inc. (Gabelli), Friess Associates	5
<u>International Equity</u>	
Fisher Investments, Capital Guardian	5
<u>Overlay Strategies</u>	
First Quadrant	5

ALTERNATIVES

<u>Absolute Return</u>	
Harris Alternatives, Pacific Alternatives Asset Mgt (PAAMCO)	6
<u>Real Estate: Core</u>	
ING Clarion Partners, UBS Real Estate	6
<u>Real Estate: Non-Core</u>	
Heitman, TA Realty	7
<u>Private Equity</u>	
Access Venture Partners, Cheyenne Capital Fund	7

CASH AND CASH EQUIVALENTS

JP Morgan	7
-----------	---

STATE OF WYOMING'S INVESTMENT PORTFOLIO

AN OVERVIEW OF STRATEGIES

The State of Wyoming's investment portfolio employs a variety of strategies to meet the state's investment goals of protection of funds, and predictable returns within acceptable risk. This overview covers the four basic investment areas: fixed income, equities, alternatives and cash. It also describes the current investment managers engaged by the state to implement these strategies.

FIXED INCOME

The State of Wyoming's fixed income mandates are designed with a goal of broad market replication, but with increased return potential via the use of active managers. Further, the diversification efforts within the fixed income portfolio are intended to provide the State consistent income with low volatility of overall returns.

THE BROAD FIXED INCOME MARKET

The broad fixed income market, represented by the Lehman Aggregate Bond Index, is comprised of the following primary sectors:

- **Treasuries** – Debt obligations of the U.S. government, secured by its full faith and credit and issued at various schedules and maturities, ranging from 3 months to 30 years. Treasuries are generally non-callable, meaning they cannot be redeemed by the issuer for redemption prior to maturity.
- **Agencies** – Securities issued by federal agencies, such as Federal National Mortgage Association (FNMA) and Federal Home Loan Bank (FHLB). Agencies can be callable, meaning they may have an embedded feature whereby it may be redeemed by the issuer prior to maturity under terms designated prior to issuance.
- **Corporates** – Debt issued by private corporations, often referred to as Credits. Corporate bonds carry default risk that is directly tied to the credit-worthiness of the corporation. Rating agencies such as Standard and Poor's, Moody's, and Fitch rate individual securities, delineating the relative degree of credit risk. Investment grade bonds range from AAA to BBB.
- **Mortgage-Backed Securities (MBS)** – Debt securities that represent ownership interest in a group of mortgages, such as those issued by the FNMA and GNMA. As mortgage holders generally pay back principal and interest each month, and also pay off mortgage debt each time they move or refinance, mortgages carry a high degree of "pre-payment risk."
- **Asset-Backed Securities (ABS)** – A type of debt security that is based on pools of assets, or collateralized by the cash flows from a specified pool of underlying assets. These asset pools can be made of any type of receivable, most commonly credit card payments, auto loans, and mortgages.

THE "CORE-PLUS" SECTOR

Types of fixed income securities not included in the Lehman Aggregate Bond Index, but often utilized opportunistically by active fixed income managers (particularly “core plus” managers) include:

- **Below Investment Grade (High Yield)** – Non investment grade bonds, referred to as high yield, carry a rating of BB or lower and typically offer a higher yield to compensate for the higher embedded credit risk, or risk of default.
- **Foreign Debt** – Bonds issued by foreign governments, agencies, and public or private companies.
- **Emerging Market Debt (EMD)** – A term used to represent bonds issued in less developed countries, which include countries in most or all of Africa, Eastern Europe, Latin America, Russia, the Middle East, and Asia - excluding Japan. Emerging Market Debt is primarily issued by sovereign issuers and tends to have a lower credit rating than other sovereign debt because of the increased economic and political risks. Most EMD issuance is rated below investment grade, though a few countries that have seen significant improvements have been upgraded to BBB or A ratings.

EXTERNAL FIXED INCOME MANAGERS: SPECIALIST ROLES

The State’s internally managed portfolio is comprised of primarily government securities, such as Treasuries and Agencies.

As a compliment to the internally managed portfolio, and as a method of obtaining better replication of the overlay market, higher returns, and better overall diversification, the State has also hired specialist managers to manage portfolios of Corporates and Agencies. The State currently uses four managers in specialist roles:

CORPORATES

- **Logan Circle Partners** – Wyoming utilizes Logan Circle's Corporate Bond Fixed Income strategy, a corporates- only strategy that focuses on proprietary, in-depth fundamental research to manage credit risk. Logan Circle's portfolio results are compared to the Lehman Brothers Credit Index.
- **Western Asset Management Company (WAMCO)** – Wyoming utilizes WAMCO’s US Corporates strategy, which invests primarily in investment grade corporate securities. WAMCO’s investment philosophy combines traditional fundamental value orientation with credit research driven ideas, with the goal of exceeding the performance of the Lehman Brothers Credit Index, without excess risk.

MORTGAGES

- **Pacific Investment Management Company (PIMCO)** – Wyoming utilizes PIMCO’s Mortgage Full Authority strategy, which focuses on MBS investments via a bottom up security selection approach and a disciplined risk management process. PIMCO’s portfolio results are evaluated relative to the Lehman Brothers Mortgage Index.
- **JP Morgan** – Wyoming utilizes JP Morgan’s Mortgage-Backed Securities strategy, which seeks to exploit opportunities in the mortgage market by utilizing robust models and analytics. JP Morgan focuses on individual security selection to add value compared to the Lehman Brothers Mortgage Index.

EXTERNAL FIXED INCOME MANAGERS: CORE-PLUS MANAGERS

In addition to specialist managers, the State also employs core plus fixed income managers, who manage a portfolio made up of primarily core sectors of the market – government securities, agencies, mortgage-backed securities, and investment grade corporate bonds. However, core-plus managers also opportunistically allocate a portion of the portfolio to “plus” sectors of the market, specifically high yield, non-US bonds, and emerging market debt. These “plus” sectors allow exposure to higher-yielding areas of the market with the goal of increasing portfolio returns. However, since these sectors are accessed tactically, core-plus managers often use them to mitigate portfolio risk as well. Core plus managers also use strategies such as yield curve positioning, duration management, and sector and security selection to add value in their portfolios. The State currently utilizes three managers in this space:

- **Western Asset Management Company (WAMCO)** – Wyoming utilized WAMCO’s core fixed income strategy historically, and in 2006 transitioned the portfolio to utilize WAMCO’s US Core Full strategy, a core plus strategy that seeks to add value above the Lehman Aggregate Bond Index while adhering to a disciplined risk-control process.
- **Lehman Brothers Asset Management** – Wyoming utilizes Lehman Brothers’ Core Plus Bond Management strategy, which is a core-plus strategy that utilizes a disciplined investment process and is highly dependent on internally generated fundamental research and extensive use of quantitative tools. Lehman is judged on how well they do relative to Lehman Aggregate Bond Index.
- **Pacific Investment Management Company (PIMCO)** – Wyoming utilizes PIMCO’s Total Return Full Authority strategy, a core-plus approach revolving around the principle of diversification. PIMCO employs top-down strategies such as yield curve positioning and sector rotation, complimented by a bottom-up approach to security selection. PIMCO’s results are evaluated relative to the Lehman Aggregate Bond Index.

Wyoming also utilizes one manager who operates a core plus strategy in a global mandate, to increase the State’s overall exposure to foreign bonds, providing additional diversification to different interest rate environments around the world:

EXTERNAL FIXED INCOME MANAGERS: GLOBAL FIXED INCOME

- **Pacific Investment Management Company (PIMCO)** – Wyoming also utilizes PIMCO as a global fixed income manager, utilizing PIMCO’s core plus abilities, but with a more global scope. The State is invested in PIMCO’s Global Aggregate Hedged strategy, which is based on PIMCO’s traditional focus on diversification and risk control, but also combines strategic country allocation based on economic and credit fundamentals. Wyoming’s portfolio that PIMCO manages remains at least 95% hedged against foreign currency exposure. The global core plus portfolio results are expected to outperform the Lehman Global Aggregate Index (Hedged).

CONVERTIBLES

A convertible bond is a bond which, at the option of the holder and in accordance with the terms of issue, is convertible into the equity shares of a corporation, combining the characteristics of both stocks and bonds. Stock characteristics capitalize on the growth of the equity market, while bond characteristics provide current income and a downside price "floor." Convertibles allow for participation in the upside of equity markets without a direct investment in equities. The State currently utilizes one manager in this space:

- **Nicholas Applegate** – The State has utilized Nicholas Applegate's US Convertibles strategy for over five years, and as of the end of 2006, the state access this strategy via investment in the NACM Convertible Bond Mutual Fund Class IV shares. Nicholas-Applegate's strategy seeks to offer upside participation in rising markets and downside protection in falling markets.

EQUITIES

In categorizing equity, there are two components that receive the most attention: size and style.

Size (or market cap) is simply a measurement of corporate size that refers to the current stock price multiplied by the number of outstanding shares.

Style refers to a method of investing that seeks to capture one or more characteristics of equity securities. In regards to style, managers usually place themselves in the value or growth camp. The distinction between growth and value investing can be best appreciated by focusing on the price-to-earnings ratio to consider the thought process of a representative manager for each style (the price-to-earnings ratio, or simply, the P/E, divides the price the stock is trading for by the earnings it generates per share. It effectively shows you how much the market is willing to pay for each dollar of earnings). A growth investor focuses on the earnings component of the P/E ratio, and they are looking for firms that have the expectation for rapid earnings growth in the near future (think of technology firms like Google or Intel). Conversely, a value investor focuses on the price component of the P/E ratio, and they are looking for stocks that are priced cheaply compared to their potential (think of firms like Exxon or GE).

Data shows that large- and small-stocks, and growth- and value-stocks returns seem to move, at times, in cycles. Over time, one style or size outperforms, and then underperforms. These different types stocks tend not to move together, creating the need for a diversified portfolio.

LARGE CAP US EQUITY

Large cap stocks are generally stocks from companies with a market capitalization between \$10 billion and \$200 billion. The State of Wyoming currently utilizes one investment manager in this space:

- **State Street Global Advisors** – The State Street portfolio is a passive portfolio, designed to track the returns of the S&P 500 Index. Passive portfolios are not designed to beat the target index, but to match its performance. A manager of an index portfolio is judged on how well they can track the target index.

SMALL / MID CAP US EQUITY

Small cap stocks are generally from companies with a market capitalization of between \$300 million and \$2 billion. *Mid cap stocks* are from companies with a market cap of \$2 to \$10 billion. The State of Wyoming currently utilizes two investment managers in this space:

- **GAMCO Investors, Inc. (Gabelli)** – The Gabelli portfolio targets the small/mid cap universe, looking for stocks with value characteristics. Gabelli focuses on companies that lead their markets and demonstrate an ability to generate free cash flow, and seeks out stocks that they believe have been undervalued by the market. Gabelli is judged on how well they do relative to the Russell 2500 Value Index.
- **Friess Associates** – The Friess portfolio targets the small/mid cap universe, looking for stocks with growth characteristics. Friess employs an earnings-driven, growth-focused strategy. Friess is looking for stocks which are growing their earnings rapidly; uncovering companies that they believe will exceed Wall Street's expectations. Friess' portfolio is compared to the Russell 2500 Growth Index.

INTERNATIONAL EQUITY

International equities are stocks from companies in the developed area outside of the United States. The EAFE Index used for performance measurement stands for "Europe, Australasia, and Far East." The State of Wyoming currently utilizes two investment managers in this space:

- **Fisher Investments** – Wyoming is invested in Fisher's Foreign Equity strategy, a core equity portfolio investing primarily in developed market securities, but which may include up to 10% in emerging markets. Fisher employs a top-down investment process, looking for countries and sectors coming into favor, and then buying stocks that complement those themes. Fisher's portfolio is evaluated versus the MSCI EAFE Index.
- **Capital Guardian** – Wyoming is invested in Capital Guardian's Non-US Equity Institutional strategy, a core equity portfolio that invests primarily in the EAFE universe, but that allows for some investments in emerging market countries, up to a maximum of 10%. Capital Guardian builds their portfolio from the bottom up – selecting select stocks based on their long-term earnings prospects and valuations compared to its peers and the market. Capital Guardian's performance is judged on how well they do relative to the MSCI EAFE Index.

OVERLAY STRATEGIES

Wyoming's current *overlay strategy* "overlays" the State's large cap S&P 500 Index portfolio using options to add uncorrelated extra return and decrease risk. Options are contracts giving someone the right, but not the obligation, to buy or sell stocks at a set price up to a certain date. The State utilizes one investment manager in this space:

- **First Quadrant** – First Quadrant is seeking to buy and sell option contracts that they believe provide a premium for the amount of risk imbedded in the contract. Given that the securities have minimal market exposure, a manager of an overlay strategy is judged on how well they do relative to a benchmark of zero. The goal of First Quadrant's strategy is to achieve an absolute return on notional principle of 75 to 175 basis points annually.

ALTERNATIVES

Alternative investments are non-traditional investments that have low correlation with most traditional asset classes, and are utilized as a way to reduce the Plan's overall volatility of returns and/or enhance overall performance.

ABSOLUTE RETURN

Absolute Return is a type of hedge fund investment that uses different strategies, such as long/short equities, arbitrage, and event driven strategies, to seek positive returns, regardless of market direction. Exposure to absolute return strategies is commonly gained via a hedge fund of funds portfolio. A fund of funds is when a manager invests in a group of single manager hedge funds or managed accounts, which may utilize a variety of investing strategies, creating a diversified investment vehicle for its investors. Absolute return strategies strive to deliver consistent positive returns as opposed to equity or fixed income investment that gives returns relative to a market benchmark. The State of Wyoming utilizes three investment managers in this space:

- **Harris Alternatives** – Wyoming is invested in the Aurora Limited Partnership, an off-the-shelf hedge fund of funds that is well diversified both by strategy and by underlying manager. Harris employs both a top-down and bottom-up approach, looking prospectively at overall strategy allocations and seeking to invest with the most talented managers in their strategy.
- **Pacific Alternative Asset Management Company (PAAMCO)** – Wyoming is invested in Newport Jackalope, a tailored fund of funds investment created specifically for the State of Wyoming, utilizing PAAMCO's Moderate Multi-Strategy product. PAAMCO's investment philosophy is to invest in a diversified portfolio of hedge funds and strategies with the goal of preserving capital and adding appreciable value (alpha) with low betas (sensitivity) to overall market indices.

REAL ESTATE

Core Real Estate refers to investments in well-leased, high quality, income producing institutional properties. Core real estate investments seek to deliver consistent returns driven by rental income, with an opportunity for price appreciation. Common property types associated with core real estate investing are apartments, office buildings, retail centers, and industrial parks. The State of Wyoming currently utilizes two investment managers in this space:

- **ING Clarion Partners** – Wyoming is invested in the Clarion Lion Properties Fund, an open-ended commingled fund that is diversified geographically across the US. The fund seeks to exploit sectors of relative value by investing in those markets and those property types that the firm believes will outperform over a five year timeframe.
- **UBS** – Wyoming is invested in the UBS Trumbull Property Fund, an actively managed open-ended fund with a core portfolio of US equity real estate diversified by property type and geographic region. Its focus is to acquire existing, well-leased properties, or properties with expansion and/or rehabilitation potential and, to a very limited extent, make forward commitments on to-be-built properties.

Non-core Real Estate refers to investments in more speculative real estate properties require rehabilitation, redevelopment, or repositioning for alternative use or upgrade, which result in a value-added return potential.

In some cases, this can even include development of vacant land. The State of Wyoming utilizes two investment managers in this space:

- **Heitman** – Wyoming is invested in Heitman Value Partners II, LP, a value-added closed-end commingled fund with a 7 to 10 year life. The fund forms property-level portfolio joint ventures with proven public and private real estate operating companies within the US that capitalize on strategies apparent in current capital and property market conditions.
- **TA Realty** – Wyoming is invested in The Realty Associates Fund VIII, a closed-end commingled fund with a 7 to 10 year life. The fund seeks to create a diversified, value-added portfolio of in well-located office, industrial, retail, and multi-family properties in primary markets across the US.

PRIVATE EQUITY

The underlying investments made by investors in *Private Equity* include limited partnership interests and direct equity/debt investments in private and/or public portfolio companies. Investments in Private Equity are generally illiquid and often take 10 to 12 years to realize full value. Private equity sectors include:

- **Venture Capital** – Equity investments in companies that are still in the process of developing products and revenue.
- **Buyout Investing** – Purchase of significant portion of companies to effect change (management, strategic or operational).
- **Mezzanine Financing** – Investments in the subordinated debt of companies often with equity participation through rights, warrants, and options.
- **Distressed Debt** – Purchase of troubled companies' debt (high yield, bank loans, trade claims) at a fraction of face value. Differing strategies with respect to levels of control.

The State of Wyoming currently utilizes two investment managers in the private equity space:

- **Access Venture Partners** - A private equity advisor specializing in venture capital. Access Venture is responsible for due diligence, screening, and selection of venture capital opportunities, as well as allocation decisions within the Fund.
- **Cheyenne Capital Fund** – A private equity advisor with an emphasis in buy-outs who is creating a diversified investment vehicle via fund investment commitments and portfolio company investments. Cheyenne Capital Fund is responsible for due diligence, screening, and selection of investment opportunities, and allocation decisions within the Fund.

CASH

Cash Equivalents are investments in highly liquid instruments, primarily US Treasuries, targeted to provide a safety of principal. Two-thirds of the cash portfolio is invested in securities that have a maximum maturity of one year. The other third is in an extended cash portfolio that has an average duration of less than 3 years. The State's cash and extended cash portfolios are currently managed by **JP Morgan**.