

Interest Rate Swap and Variable Rate Debt Programs

Managing On-Going Responsibilities
California Debt and Investment Advisory Commission
April 11, 2008

Swap Financial Group

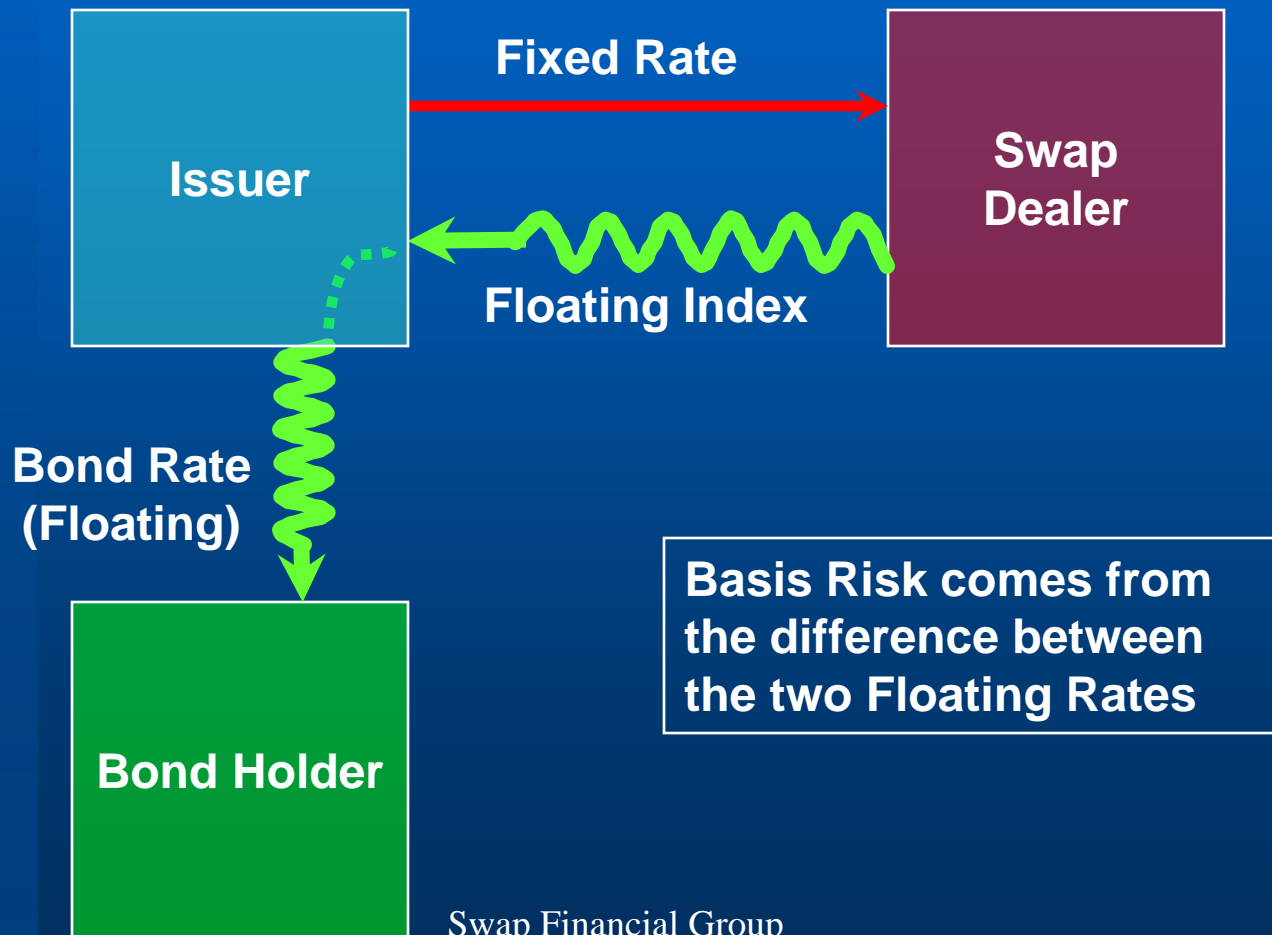
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Agenda

- **What do you need to know to maintain a variable rate program?**
- **How do actual rates compare to market-wide indexes?**
- **What factors influence actual rates?**
- **How does the market value of a swap change over time?**

Review of swap structure



Swap indexes

- The floating side of a swap is usually an index
- Two important floating indexes are:
 - **LIBOR** (London Interbank Offered Rate): Dominant index for taxable floating rates
 - **SIFMA** (Securities Industry and Financial Markets Association Municipal Swap Index, formerly the BMA Index): Dominant index for tax-exempt floating rates
- Indexes are never exactly equal to actual rates

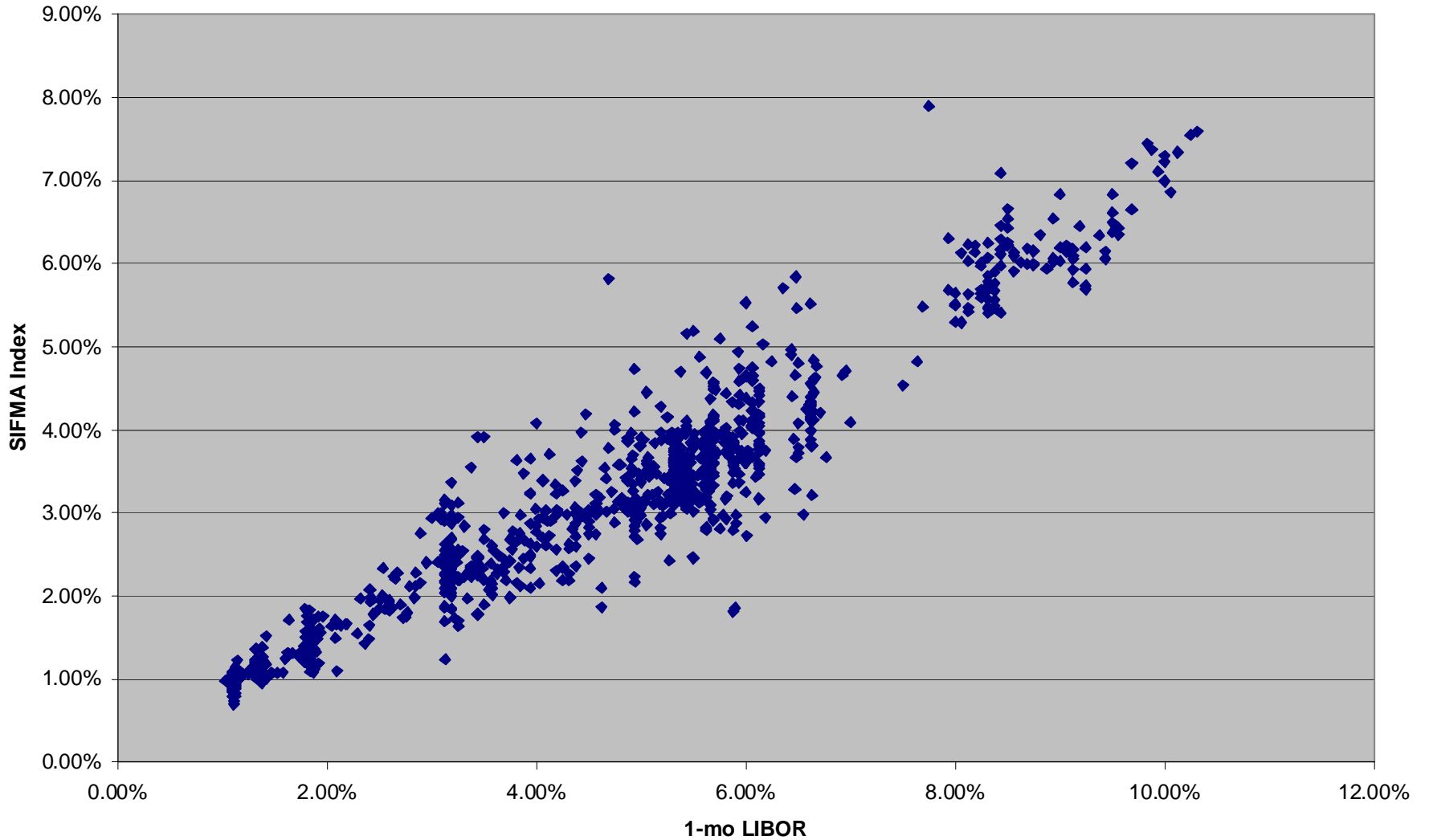
How does LIBOR work?

- **LIBOR is a rate, set once a day at 11 AM London Time by the British Bankers Association**
- **Every major currency**
- **Every short-term maturity (overnight to one year)**
- **Reflects short-term lending rates between highly creditworthy banks**

How does SIFMA work?

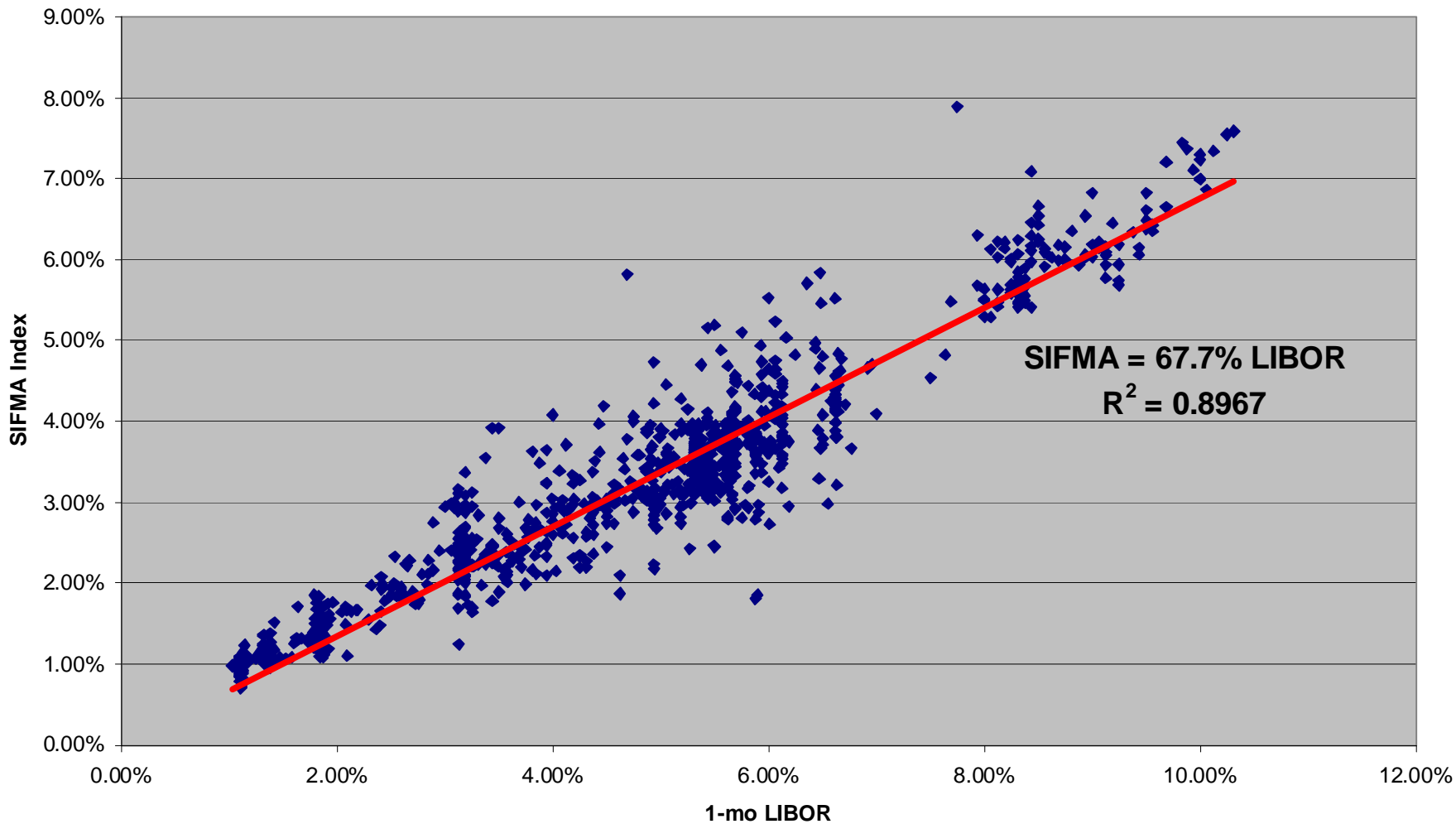
- **SIFMA is a literal arithmetic average of actual tax-exempt VRDO programs**
- **Mathematically rigorous, determined once a week by MMD Inc.**
- **Reflects multiple remarketing agents, liquidity banks**
- **Only creditworthy programs**
- **2008 problem: Tainted insurers**

SIFMA vs LIBOR, weekly since 1989



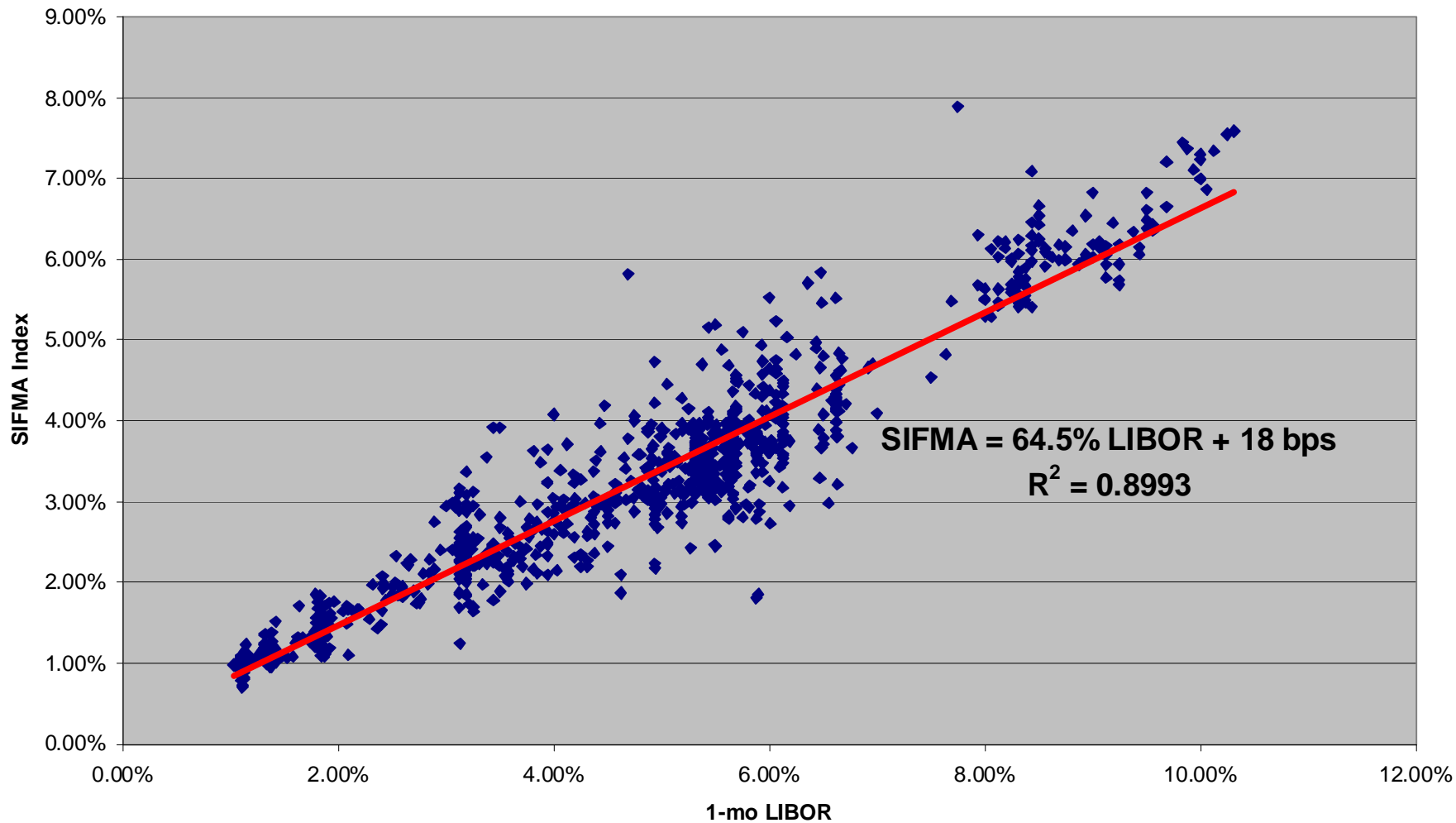
SIFMA vs LIBOR, weekly since 1989

With 'Best Fit' Line, Simple Formula

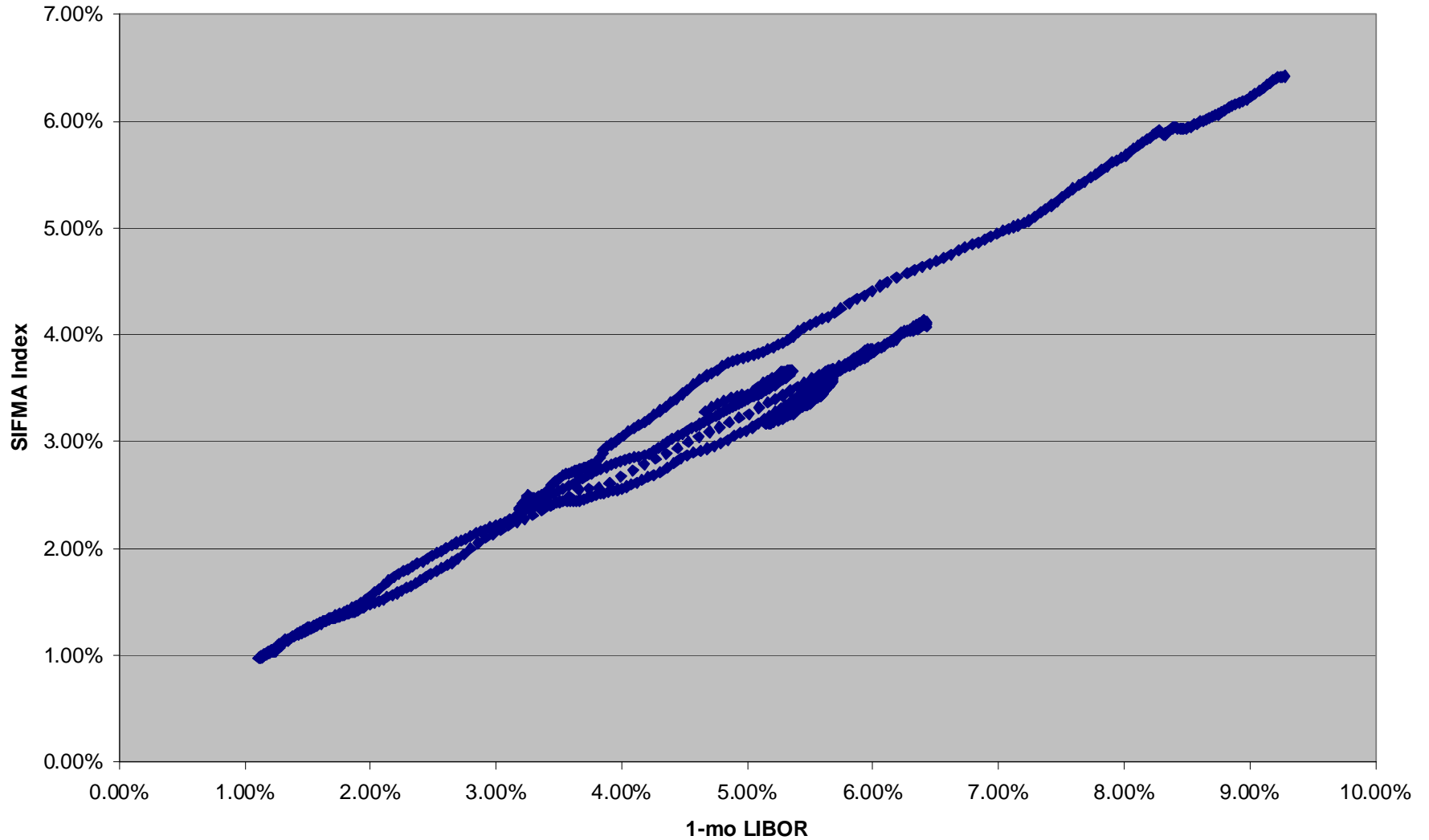


SIFMA vs LIBOR, weekly since 1989

With 'Best Fit' Line, Compound Formula

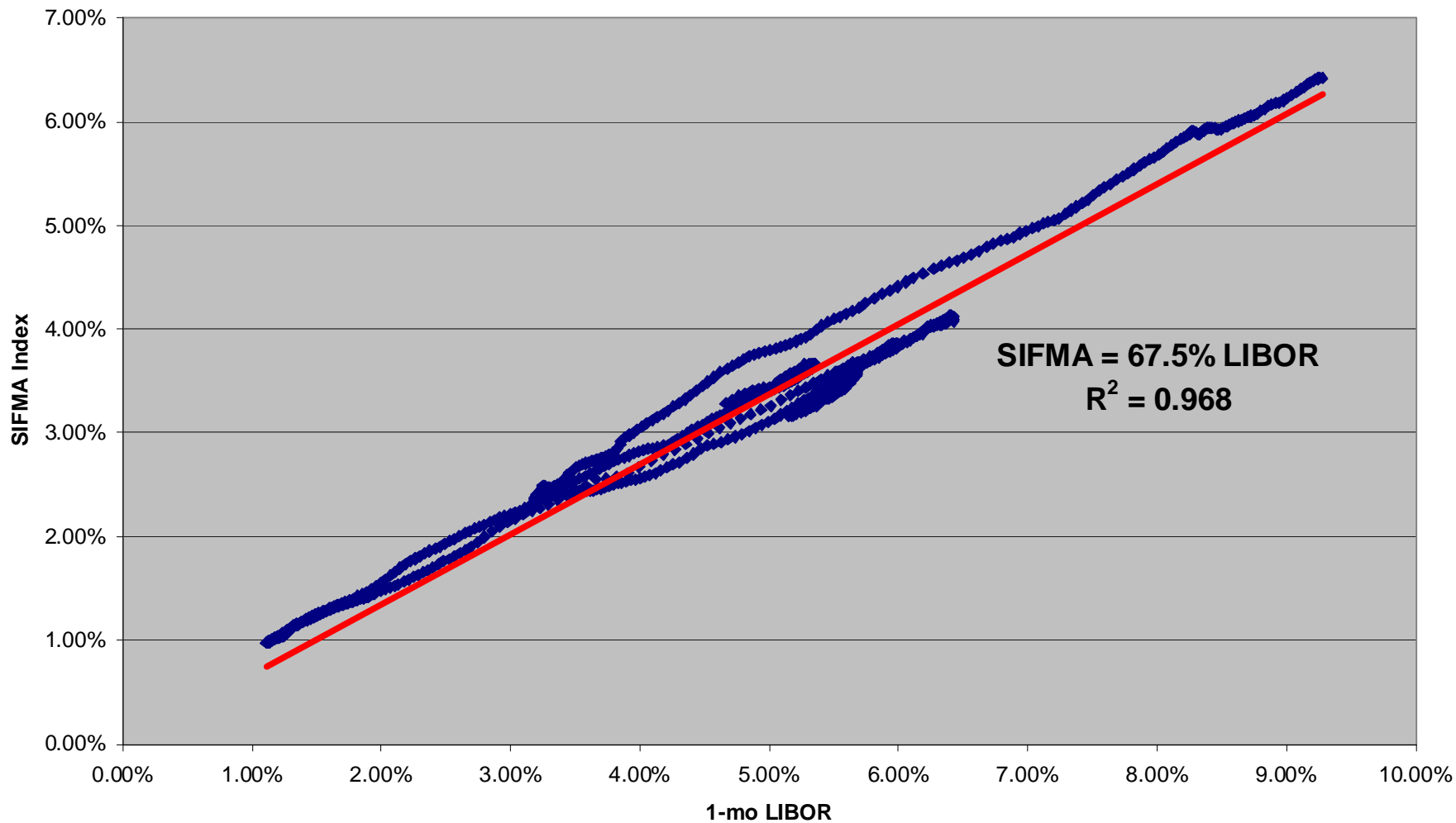


SIFMA vs LIBOR, annualized since 1989

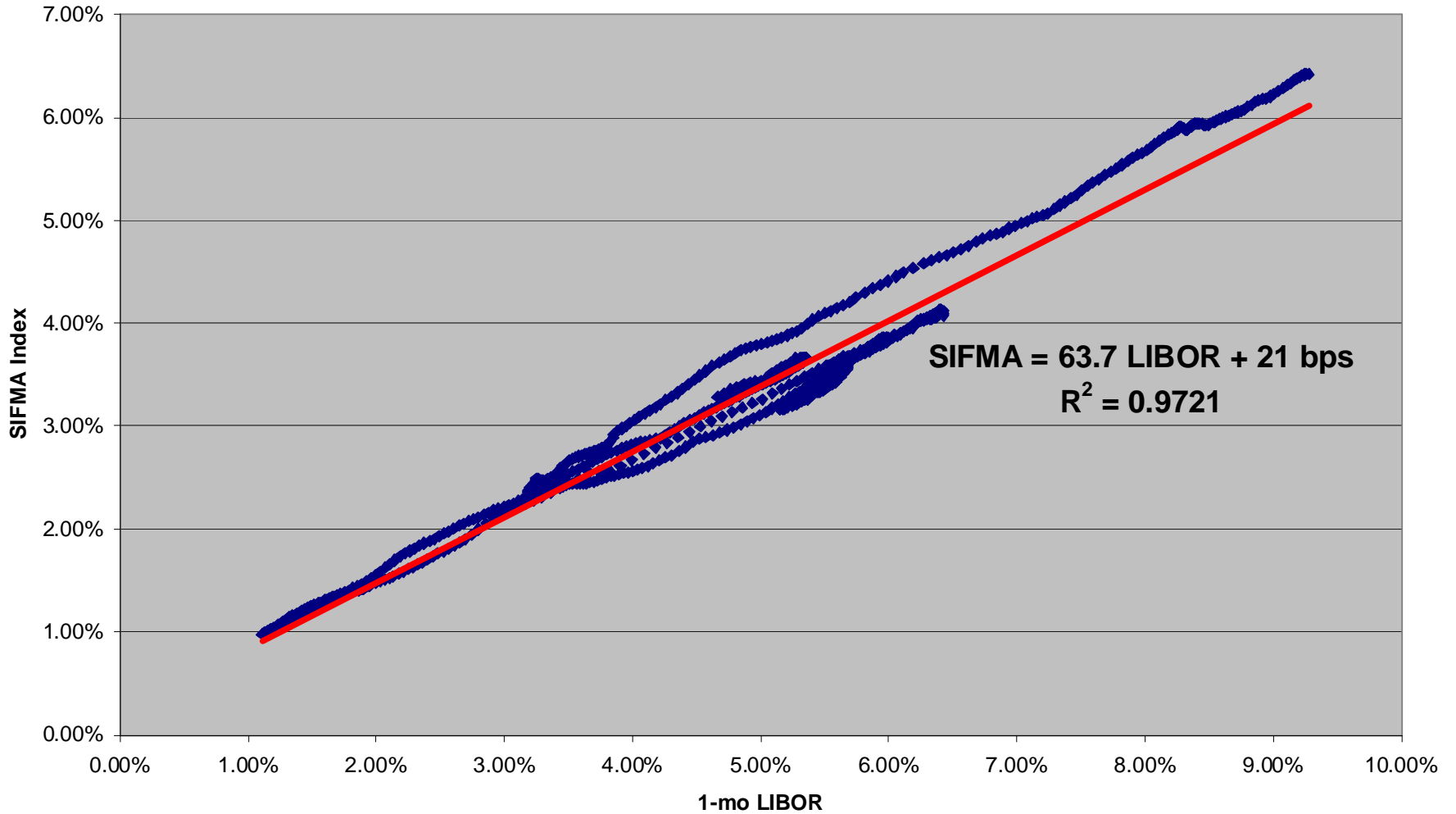


SIFMA vs LIBOR, annualized since 1989

With 'Best Fit' line, Simple Formula

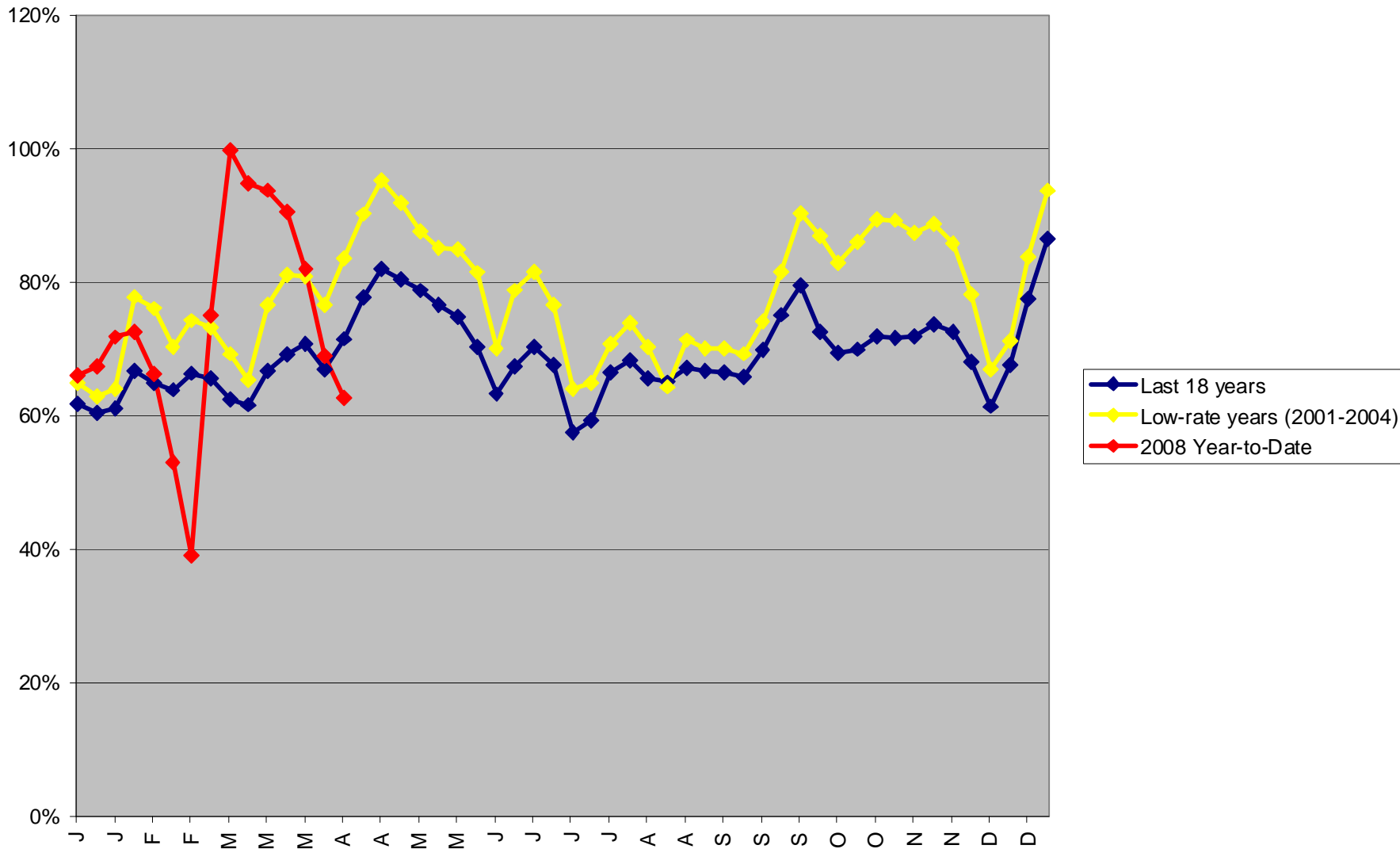


SIFMA vs LIBOR, annualized since 1989
With 'Best Fit' line, Simple Formula



SIFMA-LIBOR relationship is highly seasonal

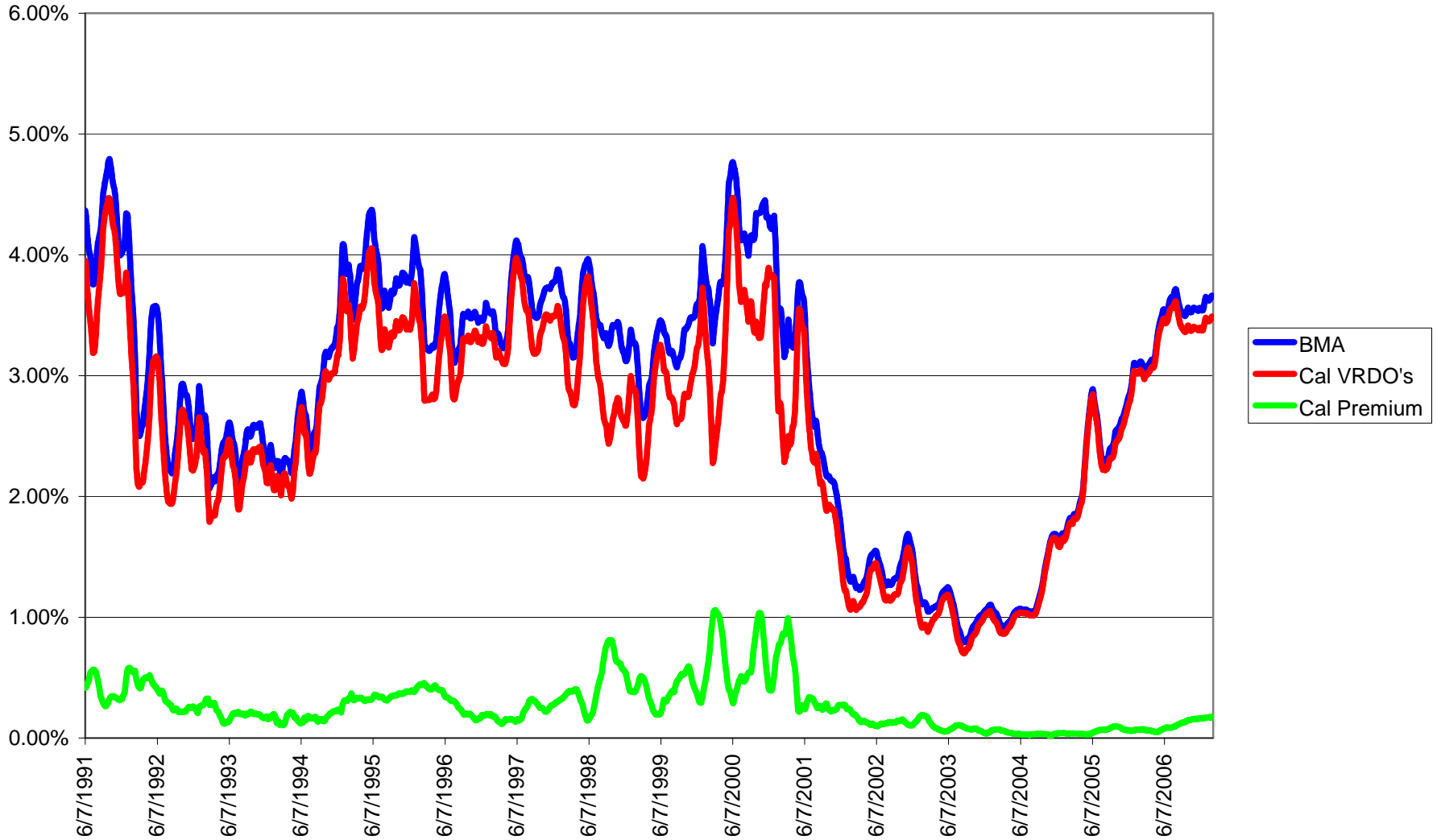
SIFMA as Percentage of LIBOR



Why bonds vary from SIFMA

- **California – “Specialty State”**
 - Double tax-exemption
 - Big base of dedicated investors
 - “The California Premium”
- **Daily VRDO’s**
- **Auction Rate Securities**
 - Non-puttable, 90% insured
 - Bond insurer crisis, liquidity crisis
 - Market seized up this year
 - Will it ever come back?

BMA vs Cal VRDO's Since 1991



How a swap changes in value

- **Like a fixed-rate bond, a swap changes in value over time**
- **Swap value changes based on three factors:**
 1. **Changes in interest rates**
 2. **Remaining years to maturity**
 3. **Amortization**

Understanding valuation changes

- **If you are a fixed-rate payer, if rates have risen, the value will be positive to you (and vice versa)**
- **Higher rates mean the swap provider would pay you to get out of the swap (he could find a higher-paying swap in the current market)**
- **GASB rules require you to provide information on the current value of your swaps**
- **New rules will take effect in 2010 that will require more thorough reporting, “effectiveness testing”**