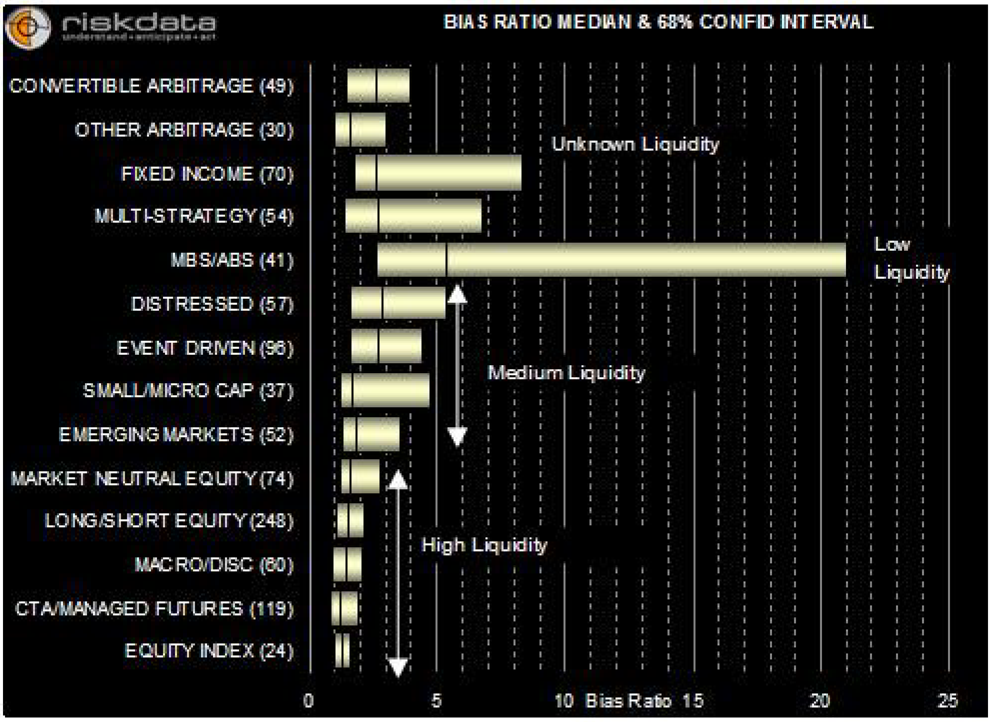
Bias Ratio: Detecting Hedge-Fund Return Smoothing

The latest version of FOFiX, Riskdata's core risk management application, includes a new indicator called the Bias Ratio, that helps in monitoring hedge funds and completing due diligence. This new indicator can assist in detecting manipulation of the Net Asset Value (NAV) when illiquid securities are involved. In addition, the Bias Ratio feature can help recognize the presence of illiquid securities where they shouldn't exist.

The Bias Ratio indicator was created by Adil Abdulali, Risk Manager at Protégé Partners, who developed it through hands-on experience while trading on the sell side, managing a hedge fund and investing with managers. The Bias Ratio relies on analyzing fund returns to measure how far they are from an unbiased distribution. The Bias Ratio of an equity index will typically be close to 1. On the other hand, the Bias Ratio of a fund that smoothes returns is much higher.

Return smoothing does not necessarily imply unfair NAV manipulation; it simply means that the value is based on an in house *subjective* process of valuation, rather than on *objective* process, for example those based on market prices.

Therefore, typically, one should expect that all funds where valuation is based on market price – i.e. trading *liquid securities* - would have the same range of Bias Ratio (typically close to 1). On the other hand, funds trading highly illiquid securities - where there is high uncertainty on the price - can exhibit very different Bias Ratio, as the manager has some discretion in the valuation process and *bias* can creep in.



To test these assumptions and give to FOFiX clients a benchmark per strategy, Riskdata's research team has conducted a review of the Bias Ratio across a sample of 1011 funds & market indexes. The results are summarized in the chart below. **Unsurprisingly, it confirms**

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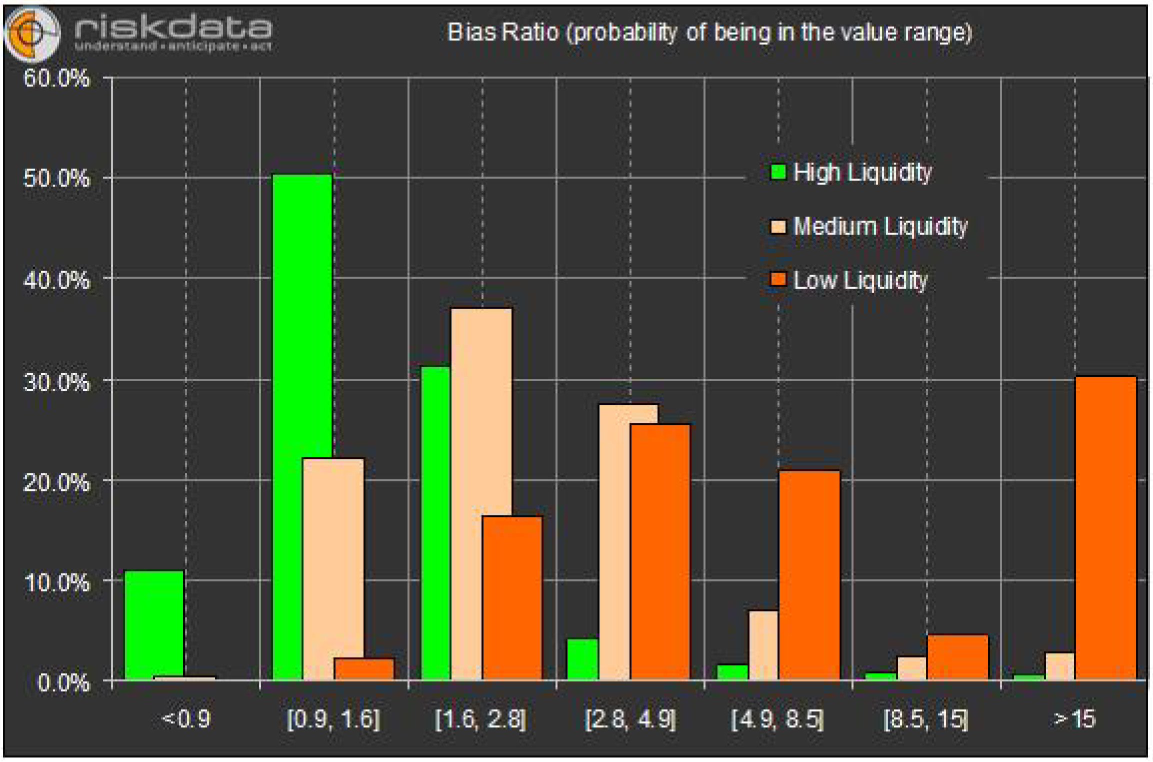
that as a group, funds with illiquid strategies (such the example involving MBS and ABS) are more likely to be smoothing their returns.

These results support, from a statistical point of view, the assumption that the Bias Ratio is an indicator of return smoothing. There is a clear statistical relationship between the liquidity of the asset universe of the strategies and their Bias Ratio. It is technically very difficult to smooth the returns for strategies dealing with high liquidity, valuation being set by market prices. However, for low liquidity strategies (for example private equity) the return has to be set in based on in house models.

50% of the funds in high liquidity bucket have a Bias Ratio in a range 0.9 to 1.5 – i.e. in the range of what is observed for equity market index - while only 2.3% of the funds running very illiquid strategies are in that case. On the other hand, 30% of funds trading illiquid strategies have a Bias Ratio beyond 15, while only 0.6% of the funds running very liquid strategies are in that case.



The Bias Ratio of a fund must be interpreted in line with the liquidity of the strategies it is running: what should be considered as abnormal is a Bias Ratio far from the median value observed for the strategy.

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