

## **On incorporating forward looking market data into linear multi-factor models**

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### **Abstract / Resumo:**

"Two novel methodologies for incorporating forward looking market data into the classical multi-factor fundamental model will be presented. The first technique utilizes general market indicators such as VIX to dynamically adjust certain model parameters allowing the model to become more responsive to current markets. The second methodology incorporates individual securities' data such as options implied as well as realized volatility.

When compared to the traditional methodology, the new models exhibit significantly higher correlation between realized and model predicted variance as well as reduced model variance forecast bias. The new techniques incorporate and reflect market sentiment more efficiently, hence being more beneficial for the purposes of portfolio risk management."