Idiosyncratic Risk, Beta and Stock Performance 2007-2011
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1) Study Purpose
To determine for a select group of UD Flyer Fund stocks, the impact of idiosyncratic risk and beta on stock performance

2) Data Requirements
Monthly returns for 20 stocks, 2007-2010
Monthly returns for S&P 500, 2007-2010

3) Model Specification (Idiosyncratic Risk)
\[ IR_i = \sqrt{\frac{1}{n} \sum_{k=1}^{n} (e_k - \bar{e})^2} \]
Where:
- \( IR_i \) = Idiosyncratic Risk for stock
- \( e_k \) = error term for \( k^{th} \) observation
- \( \bar{e} \) = mean error term for stock
- \( n \) = number of observations

4) Model Specification (Beta)
\[ R_i = a + b(R_m + e_i) \]
Where:
- \( R_i \) = return of the stock
- \( a \) = intercept
- \( b \) = regression coefficient (Beta)
- \( R_m \) = return to market (S&P 500)
- \( e_i \) = error terms

5) Estimating Equations
\[ R_i = a + b(IR_i) \]
\[ R_i = a + b(Beta_i) \]
Where:
- \( R_i \) = return for \( i^{th} \) stock
- \( a,b \) = regression parameters
- \( IR_i \) = Idiosyncratic Risk
- \( Beta_i \) = Beta for \( i^{th} \) stock

6) Return Periods
- (12/31/10) – (4/30/11)
- (4/30/11) – (9/30/11)
- (9/30/11) – (2/28/12)

7) Conclusions
- All b coefficients significant on 95% confidence level except (4/30/11 – 9/30/11) period for IR
- During Up-Swing periods in 2011 both IR and Beta have positive b coefficients
- During Down-Swing period in 2011 both IR and Beta have negative b coefficients
- Both IR and Beta have low R²’s in all time periods
- Both IR and Beta despite low R²’s have predictive capabilities