**MPT – ASSIGNMENT**

1. The “MPT – ASSIGNMENT” file contains two sheets:

* “Funds” – Monthly returns over a 3-year period for 9 mutual funds. Only one fund is identified (“GS Global Equity Portfolio EUR”); the other 8 funds are labelled with letters from A through H;
* “Benchmarks” – Monthly returns over a 3-year period (same as the funds) for 19 benchmarks.

1. The assignment consists of three tasks:
2. ***Benchmark identification*** - Identify the proper benchmark for each of the 9 funds (hint – you can use the R2 of a regression of each benchmark over each fund to find the proper benchmark).
3. ***Performance evaluation*** – For each of the 8 funds A-H compute the following measures:
   * Sharpe ratio
   * Modigliani & Modigliani R2
   * Morningstar index
   * Sortino ratio
   * Information ratio
   * Treynor ratio (beta from CAPM)
   * Alpha (Treynor-Mazuy)
   * Gamma (Treynor-Mazuy)

Within each fund category, find the best and worst fund based on the measures above. To the purpose of this task: a) funds belong to the same category if their benchmark is the same; b) the best fund is the one with more best measures in its category (the worst fund is the one with more worst measures in its category).

1. ***Style analysis*** – Estimate the asset of allocation of the “GS Global Equity Portfolio EUR” fund by performing a style analysis.
2. Solutions should be reported in the form below.

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| --- | --- | --- |
| Group Name |  | |
| Group Members |  | |
| Benchmark identification | ***Fund*** | ***Benchmark*** |
| A |  |
| B |  |
| C |  |
| D |  |
| E |  |
| F |  |
| G |  |
| H |  |
| “GS Global Equity Portfolio EUR” |  |
| Performance evaluation | Best Fund(s) |  |
| Worst Fund(s) |  |
| Style analysis | Benchmarks | Weights |
|  |  |