# PORTFOLIOBENCHMARKASSOCIATION Table Creation

Overview & Purpose

The PORTFOLIOBENCHMARKASSOCIATION script builds the mapping between portfolios and benchmarks (e.g., ESGD, EFIV).   
It supports relative performance reporting, benchmark-aware narratives, and compliance-ready factsheets.   
Each record pairs a PORTFOLIOCODE with a BENCHMARKCODE and assigns a RANK to represent primary/secondary associations.

Technical Design & Methodology

• Inputs: list of portfolio codes (from PORTFOLIOGENERALINFORMATION) and a curated list of benchmark tickers (from YAML or inline config).  
• Logic: assign 1–3 benchmarks per portfolio with unique RANK ordering; optional deterministic seeding for reproducibility.  
• Output: tidy, Snowflake-ready mapping table keyed by (PORTFOLIOCODE, BENCHMARKCODE) with RANK constraint.

Execution Instructions

1) Load portfolio codes from synthetic\_alternatives\_portfolios.csv.  
2) Define benchmark tickers (e.g., ENRG, SHE, VOTE, ESGD, EFIV) or read from benchmark\_config.yaml.  
3) Run the association script; preview mapping.  
4) Export to CSV or load to Snowflake and enforce uniqueness on (PORTFOLIOCODE, BENCHMARKCODE, RANK).

Outputs & Schema

Columns: PORTFOLIOCODE (PK in portfolio table), BENCHMARKCODE (FK to benchmark tables), RANK (1 = primary).   
This table is designed to be joined to benchmark performance for relative and excess return analytics.

Integration with Other Tables

• PORTFOLIOBENCHMARKASSOCIATION → BENCHMARKPERFORMANCE via BENCHMARKCODE + HISTORYDATE  
• PORTFOLIOBENCHMARKASSOCIATION → PORTFOLIOPERFORMANCE via PORTFOLIOCODE (for relative metrics)  
• Supports factsheet sections that display one or more benchmarks with clear precedence.

Testing & QA Use Cases

• Verify each portfolio has ≥1 benchmark and unique RANK sequence.  
• Ensure ESG-themed portfolios map to ESG-relevant benchmarks where applicable.  
• Test downstream joins to compute excess returns and benchmark-relative visuals.

Next Steps & Recommendations

• Add effective date ranges (EFFECTIVE\_FROM/TO) for benchmark changes over time.  
• Support blended benchmarks via weights and validate totals = 100% for each portfolio.  
• Automate mapping rules based on portfolio style, region, or ESG profile to minimize manual curation.