



LISBON
SCHOOL OF
ECONOMICS &
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UNIVERSIDADE DE LISBOA

Case Studies in Financial Engineering

CASE 1

PORTFOLIO +

Sept. 2019

PORTFOLIO +

Portfolio Plus – Asset Management is a financial company managing several investment funds. Two of these funds are shown in Appendix, comprising equity, bonds and derivatives.

The main difference between these two funds is the geographical basis of their investments. While the Shark US investment fund is oriented to the US market, the Shark EU fund invests in the European market, with each fund managed by a different manager.

These two funds were created in October 2015 and 2 years after they were launched, the Board of the management company decided to downsize its structure, by reviewing its strategy regarding the allocation of funds to asset managers.

In parallel, the company planned to initiate a strategy of disclosing risk indicators to its current and potential investors.

Having this information in mind and the 2-year period before 30th Sept 2017, please answer to the following questions:

- 1) Which manager should be kept in the company?
- 2) Should this decision change with a different analysis timeframe (e.g. considering only the last 12 months instead of the last 24)?
- 3) Which indicators would you disclose to inform the market on the portfolio risk profile?
 - a. How would you disclose them?
 - b. What would be the calculation basis and frequency?
 - c. What would be the reasons for these choices?
- 4) If you wish to change sharply the risk profile of **Shark US** and **Shark EU** portfolios, by reducing the risk exposure to levels corresponding to half of those observed in the last year, which measures would you propose and why?
 - a. If futures or options contracts are used, please identify these contracts (number and the type of contracts).
 - b. If portfolio changes are proposed, please identify the assets to be sold and bought.
- 5) Would any of these portfolios be suitable under a discretionary management mandate given by a human rights activist, known by following strict social responsibility principles?
- 6) Please assess these portfolios from an ESG (environmental, social and governance) point of view.
- 7) Would a focus on socially responsible investments lead to a lower portfolio performance? Please justify properly (namely by researching the literature on the performance of this type of investments, e.g. Lobe and Walkshäusl (2011), “Vice vs. Virtue Investing Around the World”, mimeo).

In order to solve the case, take into consideration the historical performance of the securities. For the derivatives portfolio, if historical prices cannot be obtained, consider theoretical prices obtained from adequate valuation models.

APPENDIX

Shark EU Fund

		Buy		Sell	
		Date	Volume / Value	Date	Volume / Value
Shares					
	NOKIA	01-Out-15	80.000		
	INDITEX	01-Out-15	70.000		
	COMMERZBANK	01-Out-15	25.000	20-Dez-16	25.000
	EDP	01-Out-15	100.000	20-Dez-16	100.000
	ENI	01-Out-15	50.000	25-Ago-17	50.000
	ALLIANCE	04-Jan-17	30.000		
	PORSCHE	04-Jan-17	50.000		
	UNILEVER	04-Jan-17	25.000		
	FTSE 100 FUTURES CONTRACT (T=MAR/18)	14-Jan-17	300		
	FTSE 100 CALL OPTIONS CONTRACT (K=5900; T=MAR/18)	14-Jan-17	400		
Bonds					
	PORTUGAL 10-YEAR BENCHMARK	01-Out-15	1.000.000,00 €		
	GREECE 10-YEAR BENCHMARK	01-Out-15	500.000,00 €		
	PORTUGAL 15-YEAR BENCHMARK	01-Out-15	500.000,00 €		

Shark US Fund

		Buy		Sell	
		Date	Volume / Value	Date	Volume / Value
Shares					
	AMAZON	01-Out-15	150.000		
	WELLS FARGO STOCK PRICES	01-Out-15	50.000		
	FOX CORP	01-Out-15	80.000		
	GENERAL MOTORS	01-Out-15	125.000		
	RALPH LAUREN CORPORATION	01-Out-15	250.000		
	GENERAL ELECTRIC	01-Out-15	180.000		
	FACEBOOK INC.	15-Jun-15	300.000	15-Jun-16	140.000
	APPLE CP	01-Out-15	100.000		
	STARBUCKS CP	01-Out-15	225.000	15-Jun-16	100.000
	BANK OF AMERICA CORP	01-Out-15	130.000		
Bonds					
	US TREASURY BOND 10-YEAR BENCHMARK	01-Out-15	\$500.000,00		
	US TREASURY BOND 30-YEAR BENCHMARK	01-Out-15	\$1.500.000,00		