Holding Cash or Investing in a Money Market Fund Between Trades?

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1 Introduction

Engage in active trading at your own risk. If you do, you will probably face the need to manage liquidities between trades. There are (at least) two options: (i) keeping those liquidities as cash (providing return) or (ii) investing them (yielding some returns) while waiting for the next trade. The choice depends on:

- the order fees: with option i, you have to place two market orders vs. zero with option ii;
- on the expected yield of the asset in which you would invest in option ii: this yield is what could potentially compensate the order fees and, hopefully bring added profit;
- and on the inter-trade duration: the longer the period, the more the asset in ii has time to appreciate.

This study aims at computing the inter-trade duration necessary to breakeven between the two options.

The asset in option ii will be called the "risk-off asset". Herein, we will focus on money market funds (MMFs) available in the French Plan Epargne en Action (PEA). But adjusting the expected yield allows any risk-off asset to be modeled.

2 Expected return of the risk-off asset

MMFs available in the PEA generally track the Euro short-term rate (€STR). Table 1 provides two examples of such funds. Note that, depending on the broker, some MMFs can be traded without order fees.

Table 1: Examples of money market funds availble on the PEA

Name	Target	Total expense ratio
AXA PEA Régularité Capitalisation EUR	Capitalized €STR + 8.5 bps - fund expenses	0.23%
LCL SERENITE PEA (C)	Capitalized €STR - fund expenses	0.27%

So the expected €STR is the determining factor for the expected return of our risk-off asset. While no one knows what its future value will be, for the sake of this study, we can pick a plausible value based on past returns. We will go for 2% net of fees per year.

3 Solving the equation

The breakeven between the two scenarios involves the following variables:

- days = inter-trade duration in trading days
- daily return = expected net daily return of the risk-off asset
- order fee = order fee applied to buy and sell orders by the broker
- cash = initial amount of liquidities (cash) to manage with either option

Equation 1 models the problem and finds the formula to compute the number of days necessary to breakeven.

$$\text{cash} = \text{cash}(1 - \text{order fee})(1 + \text{daily return})^{\text{days}}(1 - \text{order fee}) \tag{1}$$

$$1 = (1 - \text{order fee})^2(1 + \text{daily return})^{\text{days}}$$

$$(1 + \text{daily return})^{\text{days}} = \frac{1}{(1 - \text{order fee})^2}$$

$$\text{days} = \log_{1+\text{daily return}} \frac{1}{(1 - \text{order fee})^2}$$

Figure 1 conducts the numerical substitution with various order fee (0 or 0.35%) and expected return values (1.5, 2, or 2.5% yearly return converted to a daily return assuming 252

trading days per year). Logically, without order fees, option ii is preferable no matter the inter-trade duration (provided the expected return is positive).
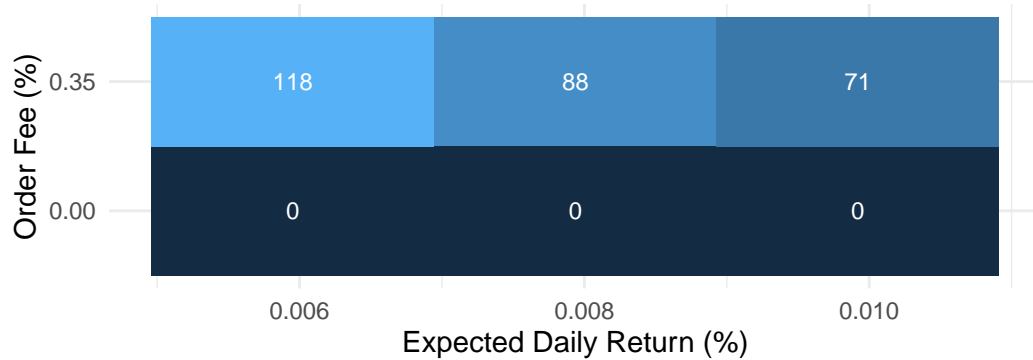

Figure 1: Number of trading days to breakeven depending on the expected daily return and the order fee

4 Appendix

This `qmd` took 0 minutes to render. It was rendered in the following environment:

```
R version 4.5.1 (2025-06-13)
Platform: x86_64-pc-linux-gnu
Running under: Ubuntu 24.04.2 LTS

Matrix products: default
BLAS: /usr/lib/x86_64-linux-gnu/openblas-pthread/libblas.so.3
LAPACK:
/usr/lib/x86_64-linux-gnu/openblas-pthread/libopenblasp-r0.3.26.so;
LAPACK version 3.12.0

attached base packages:
[1] stats graphics grDevices datasets utils methods base

other attached packages:
[1] knitr_1.50 ggplot2_3.5.2 data.table_1.17.6

loaded via a namespace (and not attached):
[1] vctrs_0.6.5 cli_3.6.5 rlang_1.1.6 xfun_0.52
[5] renv_1.1.4 generics_0.1.4 jsonlite_2.0.0 labeling_0.4.3
[9] glue_1.8.0 htmltools_0.5.8.1 scales_1.4.0 rmarkdown_2.29
[13] grid_4.5.1 evaluate_1.0.4 tibble_3.3.0 fastmap_1.2.0
[17] yaml_2.3.10 lifecycle_1.0.4 compiler_4.5.1 dplyr_1.1.4
```

```
[21] RColorBrewer_1.1-3 pkgconfig_2.0.3 farver_2.1.2 digest_0.6.37
[25] R6_2.6.1 tidyselect_1.2.1 pillar_1.10.2 magrittr_2.0.3
[29] withr_3.0.2 tools_4.5.1 gtable_0.3.6
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