



*The relevance of MCDM for
financial decisions and performance evaluation*

Part 2. Performance Evaluation

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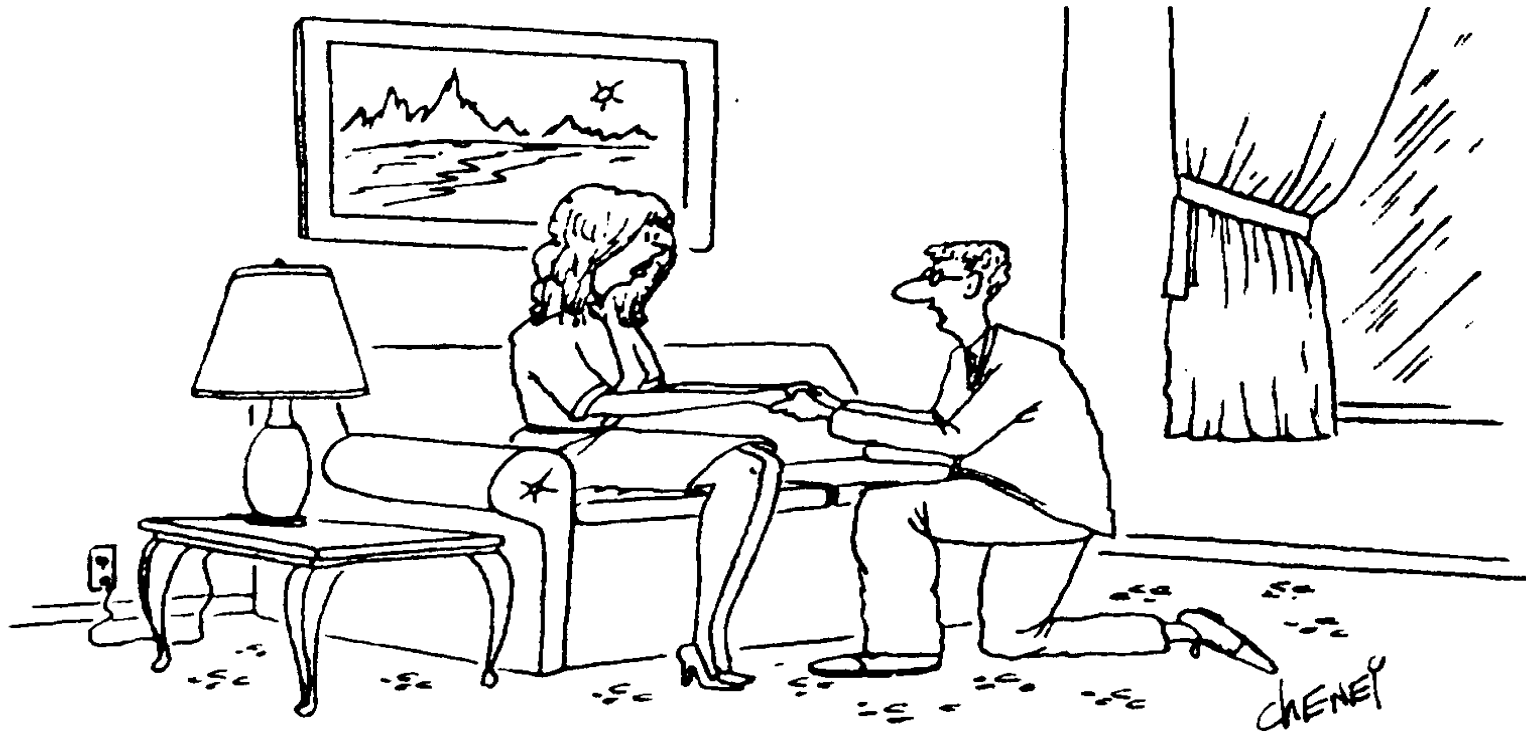
Erasmus University Rotterdam, The Netherlands

<WWW.FINANCE-ON-EUR.NL>

Eumoptfin3 workshop

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caveat :



“Marry me, Judith...with the understanding, of course, that past performance is not a guarantee of future results.”

PERFORMANCE EVALUATION

Program

- definition
- who does it?
- why do it?
- a race between Smith and Jones
- the amount of comparable cases
 - monkeys as investors

PERFORMANCE EVALUATION: WHAT IS IT?

A process,

Concerning (1) some activity which is

Evaluated in terms of (2) some performance question

By choosing (3) performance attributes

And (4) measuring the scores on these attributes

And (5) judgment of the resulting scoring profile

(ad 1) Definition activity should answer following questions:

a. Who is responsible for activity?

b. Which instrumental variables, which constraints?

c. What objectives are pursued?

Plus: Agency problems

Strategic behaviour

(ad 2) What is purpose of performance evaluation concerned?

What do you want to find out and why?

Perspective evaluator may be different from perspective 'producer' of activity

(ad 3) Choice performance attributes

What attribute variables

Ex ante, each performance attribute is a random variable

Normally, there are expectations and/or aspirations wrt the ex post attribute values:

e.g. maximise/minimise/targets/target ranges

(ad 4) Measurement scores on attributes

direct measurement vs. measurement by proxies

choice measurement scales

measurement errors

(ad 5) Judgment of scoring profile(s)

Some questions in PE:

Activity well done?

Who is the best?

Ranking

What can we learn?

PERFORMANCE EVALUATION: WHO DOES IT?

Everybody does it!

PERFORMANCE EVALUATION: WHY DO IT?

1. For fun
2. For the (historical) records
3. For competitions
4. For pricing through rating systems
(credit rating, tennis players)
5. For learning how to get better performance,
 - a. by changing the activity
 - b. by changing the actor

PERFORMANCE EVALUATION: TWO HEALTH WARNINGS

Example: Consider Smith and Jones, each trying to cover a distance of 10 kilometers as quickly as possible

Results:

Jones	31'
Smith	29'

Question: Who is the best athlete?

Two general problems

- A. Comparability cases
- B. Effect uncertainty

In other words:

Past performance is

partly determined by the characteristics of the cases

and

partly by the effect of uncontrollable risk factors

Judgment of scoring profile(s)

Solution comparability problem

1. grouping of cases; then use of averages
2. find relation between performance attributes and characteristics
 - e.g. statistics
 - e.g. d.e.a.
 - e.g. rough sets

Judgment of scoring profile(s)

Solution to problem of uncontrollable risk factors

1. identify sources of risk (uncontrollable)
2. estimate sensitivity performance for changes in these risk factors
3. correct performance for

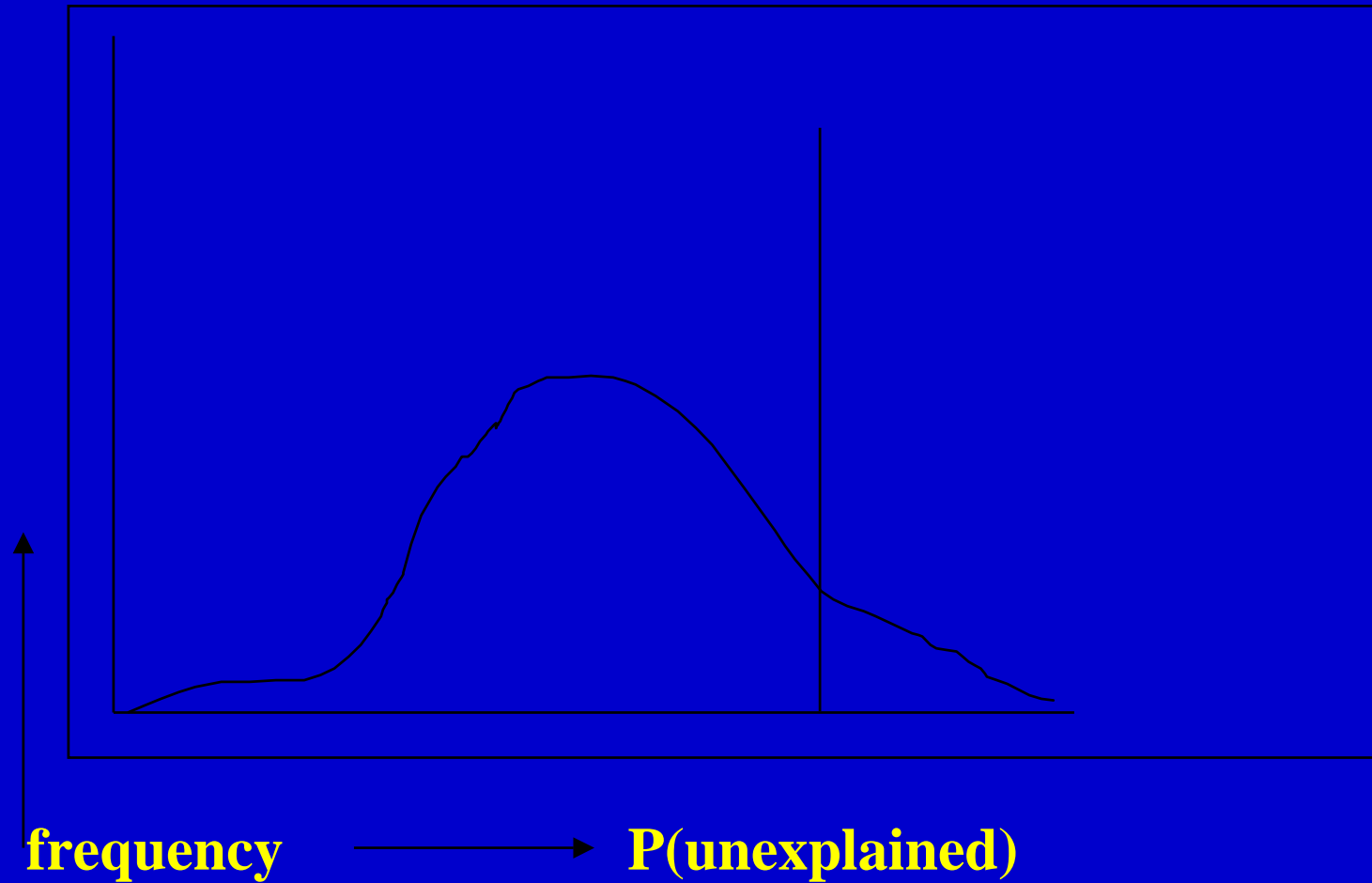
Sensitivity times Unexpected change

Judgment of scoring profile(s)

By solving problems A and B, part of performance is explained

**We should learn from unexplained part
study benchmark, e.g. the best
e.g. the average**

FRAMING THE PERFORMANCE EVALUATION PROCESS



PERFORMANCE EVALUATION: INFORMATION AVAILABLE

Quality of judgment depends a.o. on availability of information:

one case	compare with 'norm'
two plus cases	pair wise comparison (incl. benchmarking)
good sample	a.o. statistical techniques, DEA
all cases	full description

What follows is an example of the 'full description' situation

The Wild Monkey Approach to Performance Evaluation

Objective:

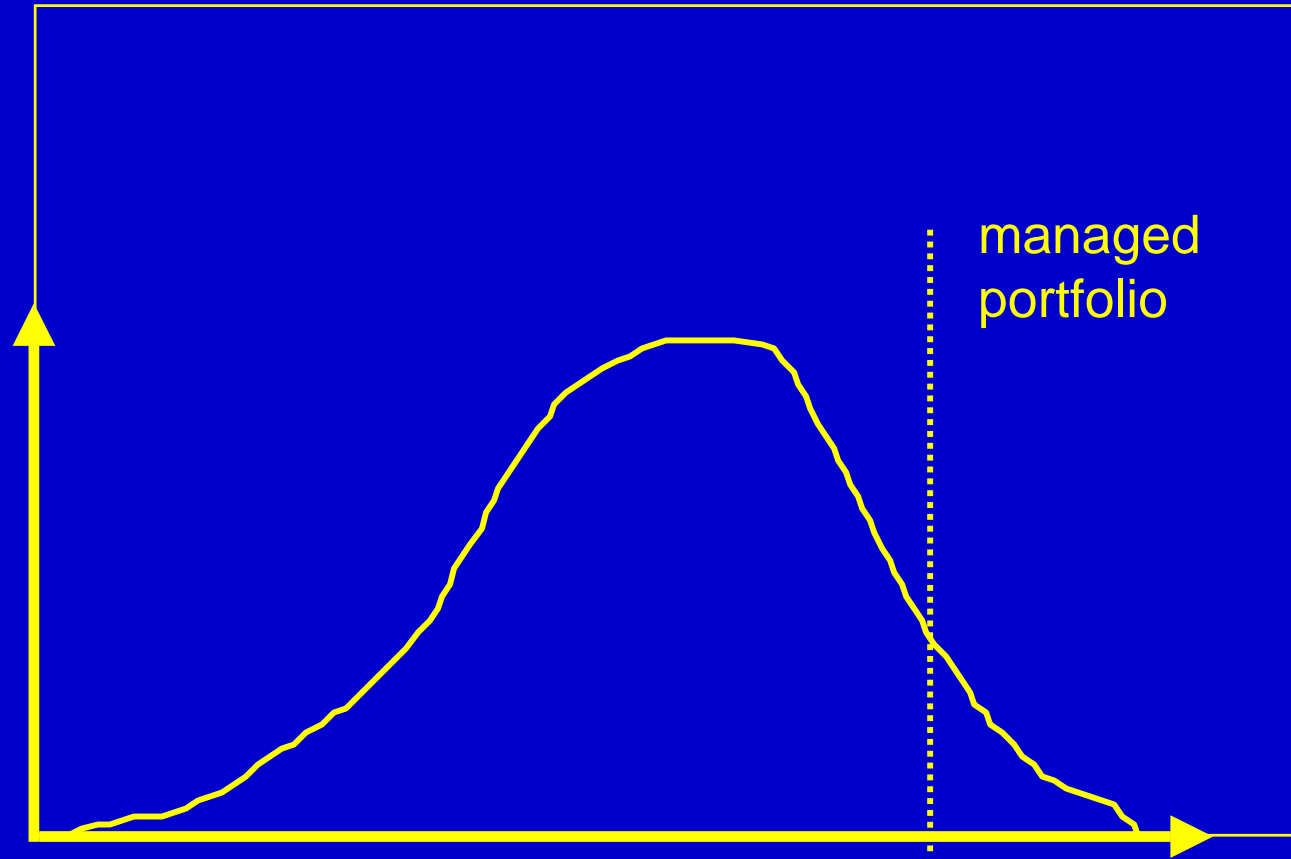
Development of a framework for the evaluation of the performance of a portfolio managed over a certain period of time, where the portfolio possibly has to satisfy a series of constraints (both institutional and policy constraints).

**Given time period, opportunity set and constraints,
We are interested in the set of all possible portfolios
that could have been formed at the beginning of the
period and the performance of every single portfolio
at the end of the period, assuming (for the moment)
static, buy-and-hold, policies**

So...>>> Create level playing field

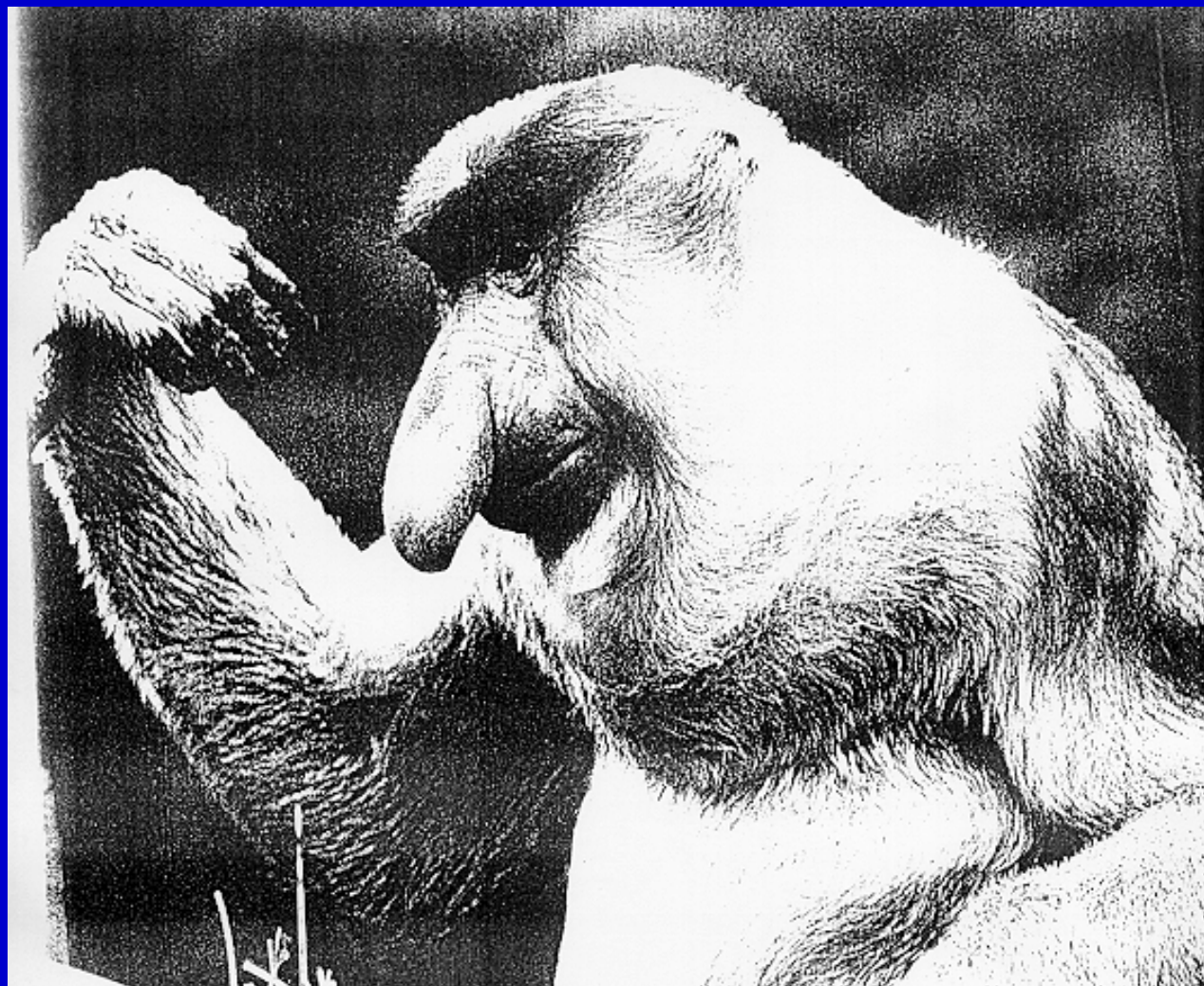
And.>>> Compare managed portfolio with all possible

frequency
portfolios



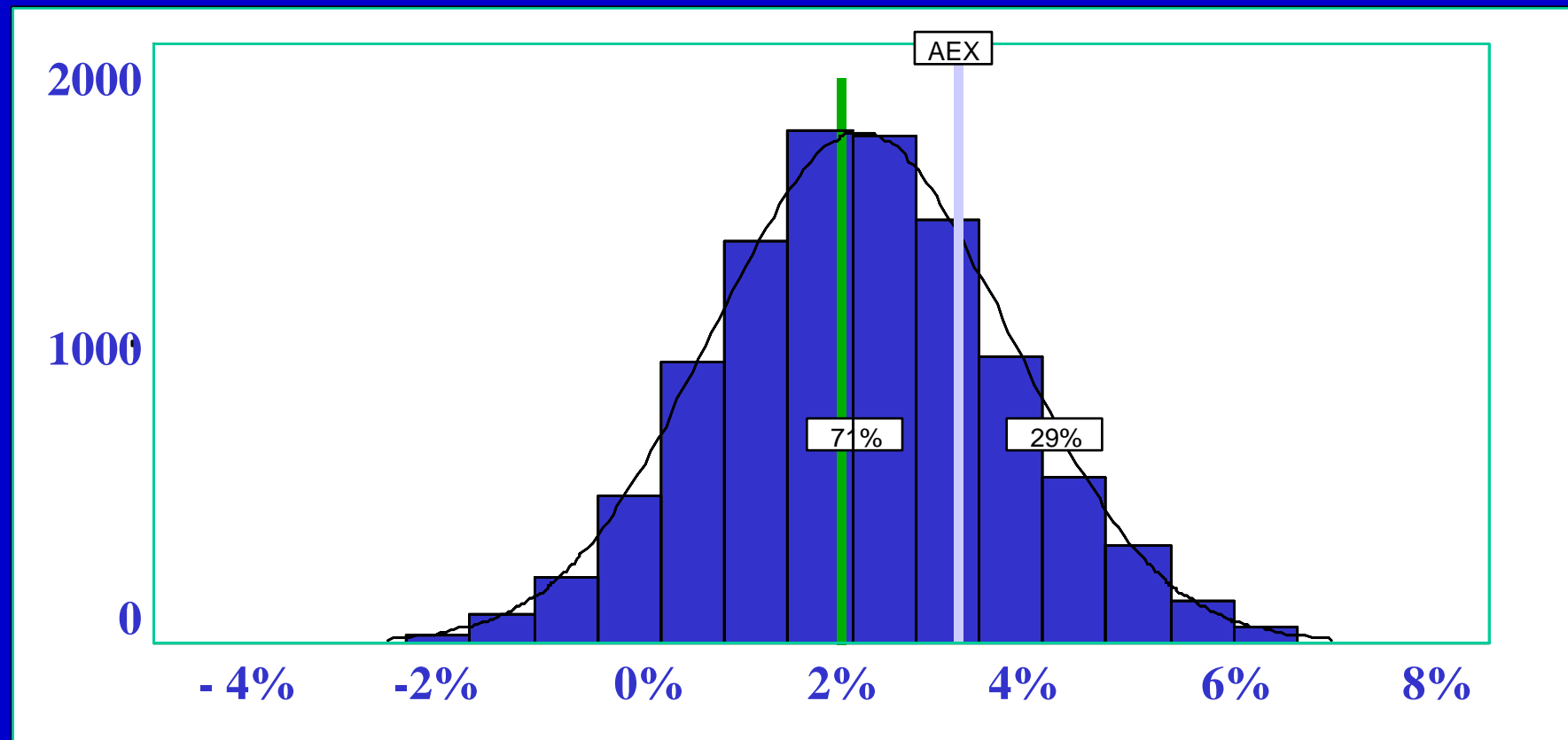
criterion values

We work with many different monkeys...



...They all perform differently

Example: July 1997



Monkeys and the AEX in year until March 2001

