

Meeting Minutes

PWC ILab Teams Meeting on 09.11.2023, 10am

Agenda: Questions on the topic, align expectations and specify further tasks
Participants: PWC: Christian Koellich, Florian Moemken,
WU: Florian Pauer, Lukas Handler,
Students: Arina Suhodolova, Sophie Grill, Alexei Volodin,
Dinara Zainullina, Sebastian Herzog
Last Meeting: Kick-Off on 30.10.23
Next Meeting: Online Teams Meeting on 24.11.23 at 9am

Introduction

Moemken Introduction as he is a previous Qfin student who participated in the PWC-ILab before and joined PWC after graduation. Now assisting in the ILab.

Questions on the Topic

Question: Why interested in this topic? Any specific research question?
Koellich Models which capture (hidden) asset drivers are already used by PWC. Frequent application in scenario planning, midterm planning and stress testing mainly in banking. When setting up such models it is important that they should be sufficiently different in their signal.

Question: Any specific interest in scenarios for stress testing?
Koellich No, focus on time series data(=signal + noise) and their embedded expectations. The input data should be aligned on what we are looking for e.g. Macro input if interested in relation to Macro signals.

Pauer Emphasis should be on the hidden states in the time series.

Question: Focus our methods on PCA or Hidden Markov Movements?
Koellich One or the other. First, gather macro time series data. Then try to get the PCA's of this data. Ask if there is a meaning connected to this data. Careful: PCA is based on a gaussian distribution. Since we know that for returns, the normality assumption does not hold you should select a modified alternative method.

Question: Which Asset Classes, time frame and region is of interest?
Koellich Asset Classes: Either have a detailed analysis within one asset class e.g. S&P 500 components or compare different classes on a general level e.g. stock indices vs. bond returns vs. macro indicators (preference). The time frame should be as long as possible. The region depends on data availability, however European markets preferred.

Key summary and tasks for next meeting

Koellich

- Check data availability, data quality and randomness in the data set.
- Find a PCA method independent of the normalization assumption.
- Attempt first PCA on various data sets and estimate relevant components and their economic meaning