

EQRC

Oxbridge Capital Partners: *Long/Short Systematic Equity*

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Context

This document was produced as a means to present Oxbridge Capital Partners (OCP) market neutral equities systematic trading methodologies. Please consult your OCP contact or/and [download our overall factsheet](#) for more information. This document summarizes one of our pure medium frequency equities strategies. Note that historically our research has been tailored to our clients need and constraints. This strategy is for illustration purposes only. It can be made bespoke to your needs and constraints.

EQRC

EQRC is Dr. Mahdavi-Damghani's limited company officially launched in 2014 in order to create a legal platform initially and primarily focused on consultancy assignments in the Quantitative Finance industry. We strive to re-invest part of my earnings in Research & Development for activities associated to the cross between AI and Finance.

About Oxbridge Capital Partners

Oxbridge Capital Partners (OCP) is the tentative name for a fund headed by an alumni of the OMI. It is composed of 1 Quantitative Analyst and one portfolio manager. We wish to collaborate with fund incubators and diversify with multiple strategies. We only work with established incubators with impeccable reputation and significant AUM. Though OCP has strategies in Equities, Commodities and Cryptocurrencies, its objectives are to diversify in all asset classes.

Overall strategy philosophy

About the Wisdom of Crowds

The wisdom of the crowd is a term used to describe the aggregated collective opinion of a group of individuals (as opposed to a single expert). Its power is often illustrated with the ox weight example of Figure 1.

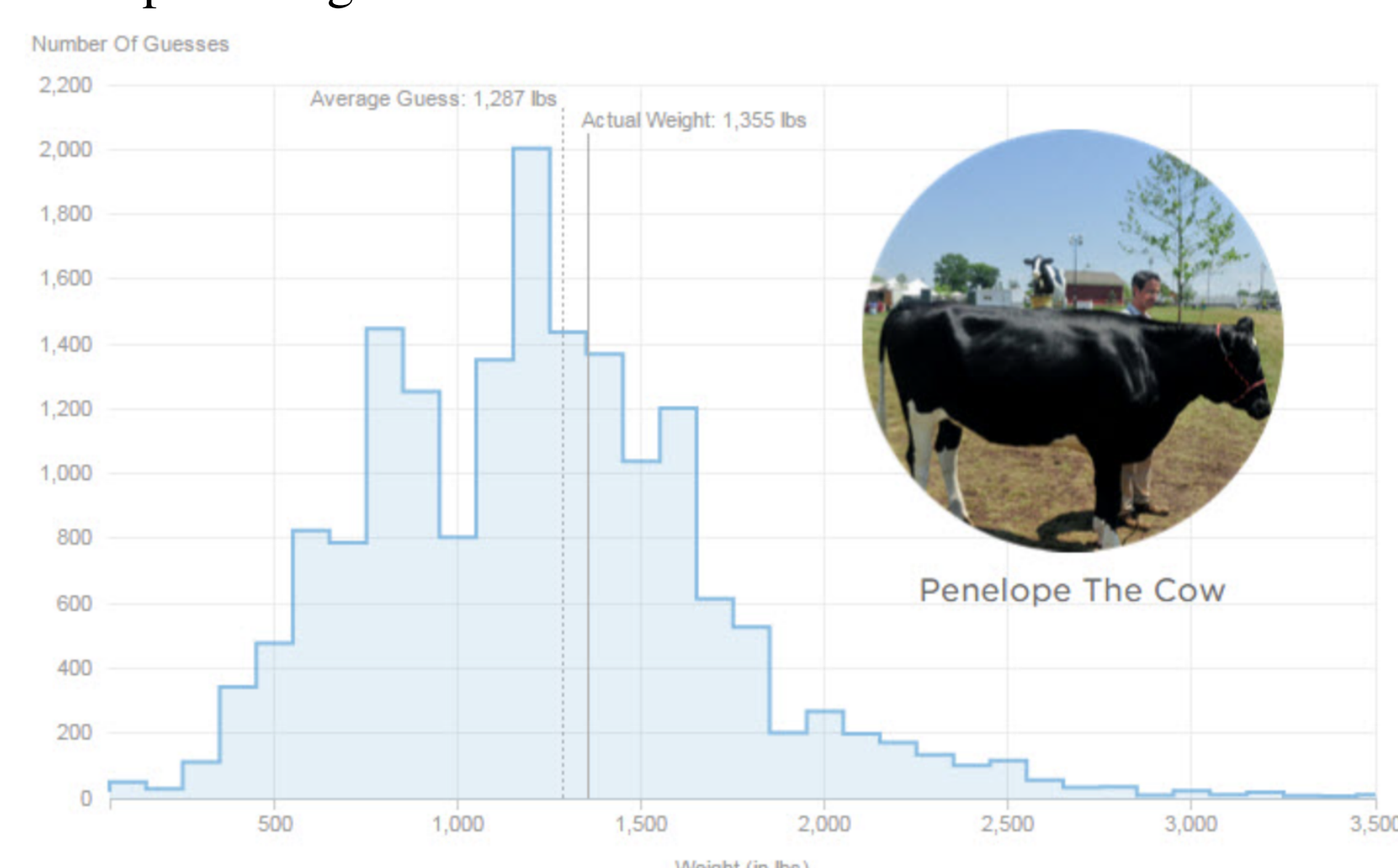


Figure 1: We can see that the real weight of the cow and the mean of the distribution are surprisingly close (an example in the wisdom of crowds).

To make the account of the research short: a random diverse crowd is asked to guess what the weight of a present cow is. Though at the individual level the crowd members are often widely wrong, their average opinion is surprising close to the real weight. This concept of crowd intelligence is widely used across different other applications including finance. For instance, though individual analyst are often very wrong about their forecast of a specific stock, at the aggregate level, they are often right. The idea of aggregating opinions to predict stock is in fact not new in finance. Many Equity Research companies have tried to do this (AlphaValue, Starmine SmartEstimate, Investarsranks etc..) with noticeable success though with also obvious limitations. Often these limitations are due to Some of the assumptions in the wisdom of crowds being violated:

- the population used for the analysis must be diverse and independent. It is often the case that analysts within research providers take on a more conservative approach and follow the heard instead of either the contrarian view or what would be more ideal, the independent view.
- It is also important to notice that it is often better to have a random crowd than have a crowd of experts. Though paradoxical this is what the scientific literature suggests. The reasons that is often given to provide context as to this seemingly unintuitive finding is associated to the concept of bias that only happens with experts in the mix.
- Another important point missed by many of these research provider is that their research should be concurrent to the research of other research providers. This is to contrast with the reality in which analyst opinion come sequentially which also creates undesirable biases.

- Finally, the average of the distribution is often confused with its mode which creates other biases because of outliers.

The motivation for L/S

Many equities, especially from different sectors, seem to have independent risk factors especially when daily correlation is used to assess these relationships. However their true co-movements become apparent in all the crisis. Being long only anything captures more a macro event than the alpha generated by that specific underlier. The subprime crisis of 2008 is one example out of many that has exposed that particular point. We will therefore make sure that, in all of our strategies, half of our portfolio is long and the other short.

Strategy decomposition

We constantly do research in order to add to our portfolio of L/S strategies. Below we give three examples.

Strategy 1: Analysts selling the same research

After the crisis top analysts left banks in order to join specialised financial research firms (eg: starmine's smartestimate, investarsranks, alphavalue etc ...). The research provided by these analyst can be explained more by quantitative methods than qualitative research, despite being sold for the latter instead of the former. Using ML techniques we can reverse-engineer the signal methodology these institutions are providing their clients. We then can long the equities with good "reviews" and short the bad ones. We can then use clever timing in order to execute those reversed-engineered signals few minutes before they are provided to clients to get an additional boost in the alpha generated. The ecosystem of equities used for this strategy is the of one the research providers.

Strategy 2: Index providers re-balancing timing

Many large asset managers want to have a long only exposure to specific asset classes. The S&P500 for instance is a simple macro strategy many asset managers have. The construction of the S&P500 is transparent. Many banks on the sell side offer exposure to these types of global indexes through simple ETFs (eg: SPY). Often these products are sold and re-balanced on the daily basis to abide by the agreed methodology. Knowing what these methodologies are and also using ML techniques to find the timing where these re-balancing opportunities occur can present a great opportunity to get alpha using some of the theories associated to short term mean reversion. Going short the equities that were overbought during the day and going long the ones that were oversold is another example of our LS strategies. The ecosystem of equities used for this strategy is the STOXX Europe 600 and the SP 500.

Strategy 3: Alternative Data for ESG

This next strategy is one that we are currently investigating. The [aggregate confusion](#) generated by the divergence in ESG Ratings is producing a source of alpha, especially on the short side, that is new and probably long lasting. Indeed the theme of Environmental, Social, and Governance (ESG) has emerged as a significant game changer in asset management in the past few years. Long only giants such as Blackrock have in fact [officialised their commitment to sustainability](#). Indeed it has been recently shown that [ESG ratings are unpreclicable](#) but that strong suspicions exists in terms of [aligning the ratings with the returns](#). Understanding this interesting ecosystem opens opportunities on a monthly re-balancing period. The ecosystem of equities used for this strategy is the STOXX Europe 600 and the SP 500.

Overall performance

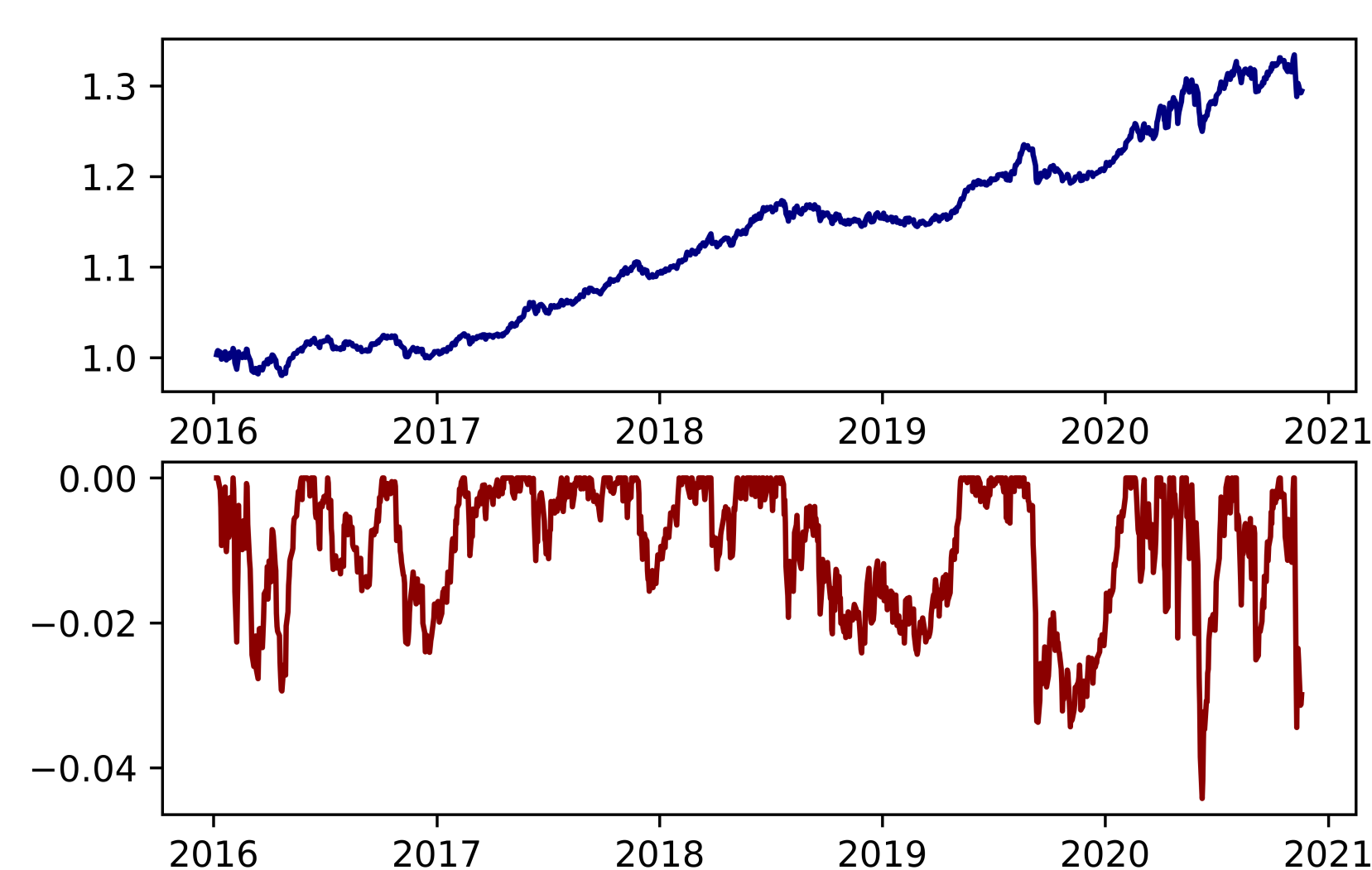


Figure 2: Our Equities L/S P&L (blue) and its rolling drawdown (red)

P&L and drawdown statistics

In Figure 2 we can see in blue the historical performance of one of our L/S equity portfolios as well as its rolling drawdown in red. As one may notice the P&L is consistent in its behaviour and the drawdowns are within our risk limits. This is confirmed by the following table. The latter indicates an average SR of 1.4 with 26% returns once leveraged 4 times and a resulting maximum draw-down that remains under 20%.

Start	End	Returns	Sharpe Ratio	Drawdown
2016/01/01	2016/12/31	0.6%	0.1	-2.9%
2017/01/01	2017/12/31	12.1%	3.5	-1.6%
2018/01/01	2018/12/31	7.9%	1.9	-2.4%
2019/01/01	2019/12/31	6.7%	1.6	-3.4%
2020/01/01	2020/12/31	11.2%	1.4	-4.4%
Yearly Averages		6.4%	1.4	-2.9%
Average x4 Leverage		25.6%	1.4	-17.6%

Backtests will be updated

Note that these figures are a bit in the past because we had initially planned to deploy this strategy in Andurand Capital in 2021 but they decided, instead, to only focus on our commodities strategies. These are market verifiable date, the year we worked at Andurand Capital, [the fund returned 109%](#) and the subsequent year (we had left), the fund [lost more than 50%](#). Though all the gains were not thanks to our strategies, we believed that our approach to risk management was a healthier approach when trading clients money. Indeed our LS approach was a more responsible angle to investing which we hope have been demonstrated by our overall trading and risk management philosophy. A new updated backtest will be performed prior to trading the above strategy again. This will take a bit of time but we will conduct the research. Since we are unaware of the level of interest at this stage we would kindly ask you to assess the methodology as it is since the backtest update will take time and resources without a significant benefit at this stage.

Fees and rationale to invest

At OCP, we believe that we have the right mix of technical expertise and experience (which we hope can be seen in our senior management). We require a minimum of \$20M AUM and consider a minimum of 50% as for the P&L and the management fees share. We believe that we bring with us a wealth of experience and we look forward to demonstrating our abilities as we continue to strive for excellence and continued commitment to generating orthogonal or/and superior, risk-adjusted returns.

More about OCP's Quant team



Dr. Babak Mahdavi-Damghani (BMD) completed his PhD in Machine Learning for Quantitative Finance at the University of Oxford. He has a broad range of work experiences in the financial industry notably having worked for Citigroup, Socgen, Cantab Capital Partners, Credit Suisse, LCH and the Oxford Algorithmic Trading Programme. He has experience through all the major asset classes in both the buy & sell sides. He is the founder of EQRC and an alumni of the Oxford Man Institute of Quantitative Finance in the area of Machine Learning. He is also the author of numerous [publications](#), including cover stories of Wilmott magazine and mathematical models currently taught at the CQF (eg: [Cointelation](#), [IVP](#), [UTOPE](#) & [HFTE](#) model).

EQRC The **quant team** (QT), is composed of an exceptional group of professional talents selected through a long rigorous selection process involving, technical expertise, creativity and integrity.

All the members of the QT have postgraduate diplomas from top tier Universities. The requirements are a specialised MSc in Quantitative Finance (or strongly related fields) or a PhD in a Quantitative field (Machine Learning, Mathematics, Physics, Computer Science, Engineering, Statistics) with relevant work experience.

Disclaimer

In order to abide by the regulations laid out by the SEC & FCA, we take this opportunity to remind the reader, that although done in good faith, this documents cannot be interpreted as financial advice and that historical returns are not a reliable measure of future performance.