

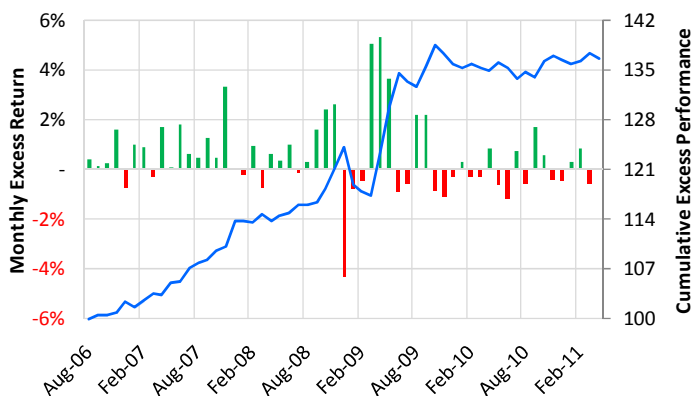
A European Equity Long Factor: Performance and Risk

Institutional investment funds are the main providers of stock borrowed by short sellers. When those institutions buy or sell securities, stock flows in and out of lendable inventory.

This suggests that daily lendable data might be a proxy for institutional ownership. For the Stoxx 600, the cross sectional correlation of lendable inventory with free float¹ is +0.69; and with institutional ownership it is +0.50. This supports the view that lendable data might provide a high frequency proxy for changes in these lower frequency measures. The correlations are not perfect, suggesting that lendable is also tracking some other elements of ownership structure.

Can this information be used in portfolio construction?

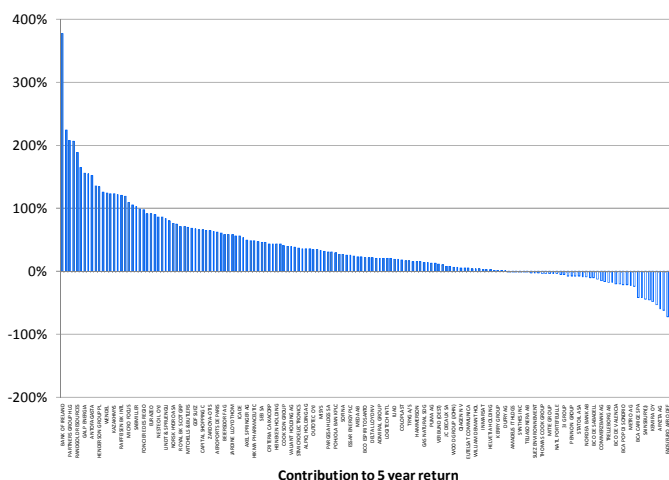
The following chart and table shows the performance of stocks with low lendable, compared with the performance of the broader Stoxx 600² index. Stocks with low lendable tend to outperform. This effect has been muted in recent months, but it remains positive. The worst month coincided with the 'junk rally'.



Over the period, the annual average return is 6.9%. The excess return per unit of tracking risk (the active information ratio) is 1.3. Turnover is 2.3x pa, which is relatively low for a 'raw' quantitative strategy.

Annual Returns	6.9%
Annual Volatility	5.4%
Information Ratio	1.3
Worst Single Month Return	-4%
Median Monthly Return	0.3%
Annual Turnover	2.3

Are these returns concentrated in a few stocks?



This shows the return contribution from each of the 167 stocks which were at some point held in the portfolio. Removing the top contributors reduces the return pa by about 1%. There is a clear bias towards positive contributions; it is also likely that fundamental managers would have selected out some of the more negative performers for other reasons.

[\[Contact Data Explorers for the detailed list of stock names\]](#)

¹ All as % of shares outstanding. Free Float and Institutional Ownership source: Bloomberg

² Monthly Rebalancing, August 2006 – March 2011; survivor bias very limited (based on comparison of returns for initial period sample vs end period sample); country layering applied.

Why might low lendable be a factor? Large family holdings, cross shareholdings, or strategic parent holdings – these may allow management to develop a long term investment focus, creating niche businesses, or high barriers to entry, or an above average earnings track record. Such stocks will tend to be tightly held by a limited number of institutional investors, which restricts the lendable. This view is supported by the correlation between inventory concentration and lendable, which is -0.27 across the sample and -0.44 for the lowest decile.

Restrictions on lendable also imply a direct restriction on loans. Across the sample, the correlation between loans and lendable (as a % of shares outstanding) is +0.08; but for the lowest decile it is +0.40. So low lendable either inhibits short selling or (more probably) coincides with stocks which are unattractive to short sellers.

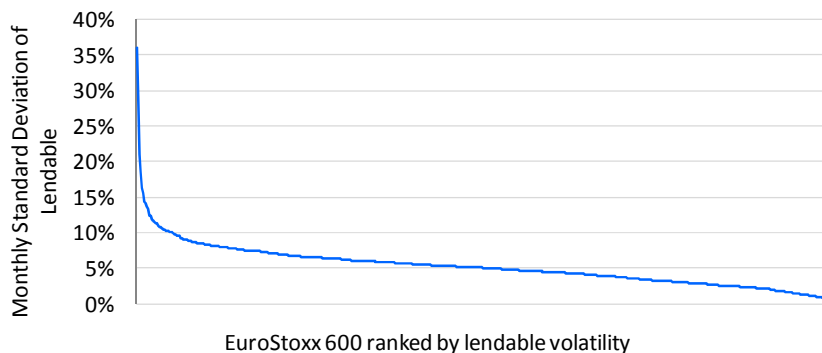
How practical is the implementation of this strategy?

Fund Value \$	
10m	100%
50m	98%
100m	97%
500m	89%
1bn	82%
3bn	65%
5bn	52%

How practical is the implementation of this strategy? In this table we assume a unit size of 1.7% of the fund – i.e. equal weights across 60 stocks, equivalent to the lowest lendable decile of the 600 stocks in the universe.

This shows that a fund with AuM of \$1bn, and a unit size of \$16m, will be able to implement 82% of the signalled trades on the rebalance date, based on the volume traded on that date.

How often does this signal change?



How often does this signal change? This chart shows the monthly % variation in lendable across the Stoxx 600. For most stocks, lendable changes infrequently; but a significant number show changes of 20% or more each month.

Conclusions:

- *'Low lendable' is a European equity factor which can be used as an overlay in portfolio construction.*
- *This factor is related to institutional ownership and free float, but also reflects other factors – such as tightly held stocks – which do not show up in these official statistics.*
- *This factor can be implemented, with limited friction, by large (\$1bn+) funds; it is broadly based.*
- *Lendable data is not distorted by dividend arbitrage.*
- *Lendable is available daily; certain stocks show rapid changes in lendable.*

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