



Make a call: Assessing capital calls velocity for closed end APAC non-listed real estate funds



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Introduction

- Non-core Asian real estate funds exhibit contrasting capital calls sequence
- Single sector, single country and value added vehicles have a greater capital calls velocity compared to their multi sector, multi country and opportunity peers
- Investors should therefore budget accordingly when considering either group of funds to invest in

As once great the baseball-playing philosopher Yogi Berra observed, 'it is tough to make predictions, especially about the future'¹. For economists and finance professionals this remark may seem all but true. Naysayers comment that economic forecasts are often wrong and hence, given their inaccuracy, one should refrain from forecasting. However, as most may agree, forecasts (in finance in particular) are inescapable². Whereas uncertainty severely afflicts investments, any forecast is considered to be better than no forecast in judging the future market direction, as well as investment gains and losses.

Investors with private capital allocations assign considerable resources to forecast future capital calls which is an act of necessity rather than choice. The challenge for LPs is to estimate the amount required and schedule of calls to meet their commitments. Committed capital today is unlikely to be called in immediately. GPs may postpone drawdowns with anticipation that asset price will adjust or be in a search for acquisitions that match vehicle strategy.

Development ventures as a rule are plagued by delays³. Likewise, managers may use credit to pre-finance acquisitions and refrain from using LPs' equity, subsequently delaying equity drawdowns.

This uncertain schedule and velocity of drawdowns is somewhat of an indistinguishable feature of alternatives investments. Takahashi and Alexander (2011) however came to the rescue with their 'illiquid alternative asset fund model'⁴. Commonly referred to as pacing model, it uses six inputs: i. rate of contribution; ii. capital commitments; iii. life of fund in years; iv. distribution changes over time; v. annual growth rate; vi. and yield rate. The model then produces three outputs: i. capital contributions; ii. distributions; and iii. vehicle NAV.

With regards to capitals calls sequence, researchers acknowledge that capital calls are heavily concentrated in the first few years of the fund's life.

The model assumes 25% contribution rate in year one, 33.3% contribution rate in year two, and 50% contribution rate in subsequent years. Likewise, capital call totals do not sum to committed capital as private funds rarely draw down all committed equity.

More recently, Burgiss also tackled the issue of capital calls uncertainty in private vehicles⁵. The group was critical of the Takahashi and Alexander model and therefore proposed a novel so called maximum probable contribution (MPC) approach to model capital calls and distributions.

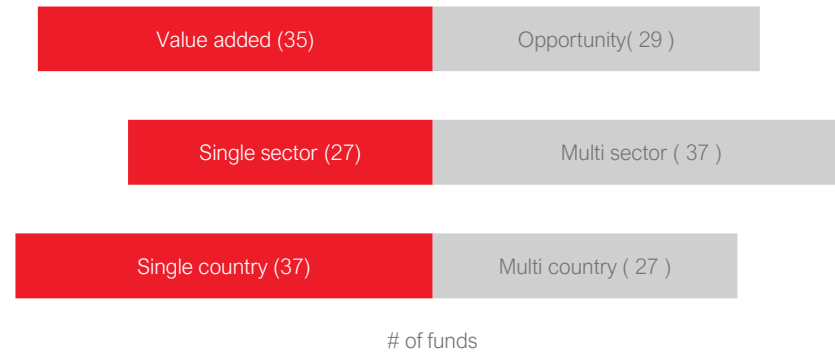
Interestingly, and to the best of author's knowledge, no prior study looked explicitly into Asia Pacific non-listed real estate funds' capital call sequence. To fill the gap as well as gain additional insights on the subject, this paper assesses the typical capital calls velocity for closed end APAC non-listed real estate funds. The study contributes to a better understanding of capital calls pattern. It can also enrich LPs' non-listed APAC real estate funds investment programme.

Data

The analysis is based on ANREV’s proprietary dataset of Asia Pacific non-listed real estate funds which comprise the ANREV Annual Index universe. The ANREV Annual Index measures net asset value (NAV) based annual performance of non-listed real estate funds. Returns are net of all fees and other costs and represent the aggregate investor return. The Index is available from 2006.

The Index universe contains a mixture of funds which differ by style, structure, domicile, vintage, as well as other fund characteristics. The current study looks into closed end funds only of which the sample of 64 vehicles is available. Of the total, 27 funds are opportunity vehicles, the remaining 37 are value added in style. With regards to target sector, the split is as follows: 37 are multi sector and 27 are single sector. Target country wise, 29 funds are multi-country and 35 are single country funds of which 18 target Japan, 9 China, 3 Australia, 2 Korea and 1 each targeting India, New Zealand and Vietnam. The sample also contains a blend of funds by their liquidation status where the split is even between live (32) and liquidated (32) vehicles.

Figure 1 – Sample breakdown



Capital call patterns

The cursory examination of drawdown patterns presents with an interesting result. Taken as a group, non-core APAC non-listed real estate funds on aggregate call the bulk off capital during the first four years of funds' life. Around 20% of capital is being called annually with the trend decaying in subsequent years.

However, when the capital calls schedule is assessed more granularly, a somewhat different picture emerges. Considering capital calls distribution by funds style, value added and opportunity funds exhibit a diverging sequence. Value added vehicles call in around 25% of capital per annum in first three years of a fund life. Their opportunity peers take longer to call in the majority of LPs commitments. Opportunity funds' calls are also thinner.

Considering target sector strategies, single sector and multi sector vehicles exhibit contrasting capital call patterns. Single sector (important to re-iterate that these are non-core funds) call in the greatest share of commitments in the early years of the fund life at a rate of circa 25% p.a. Multi sector (non-core) funds take much longer to call LPs' commitments drawing down around 17% of committed capital per year on average.

With regards to capital calls distribution by country strategy, the picture is similar to that observed among single and multi sector strategy funds.

Single country funds call in the lion's share of LPs' capital during the first three years of the fund life. Multi country (same as multi sector) funds tend to exhibit lengthier drawdown schedules.

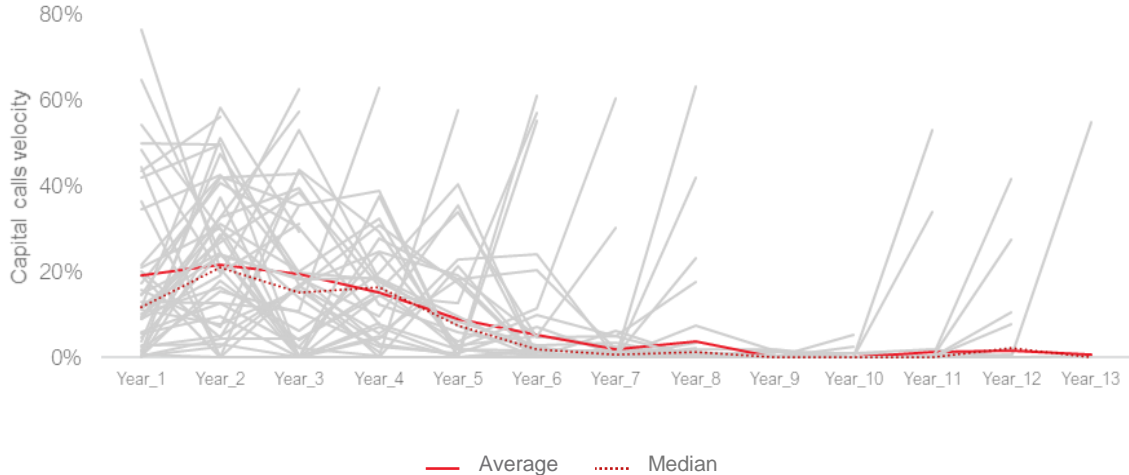
The above numbers do reconcile with practice. Considering opportunity vehicles, their strategies routinely contain a notable development component that in itself is a long term endeavour. Opportunity funds may commit to a (development) project during the investment period of the vehicle. However, investors' equity is being called at the later stages of the project and in a form of progress payments what slims capital calls velocity.

With regards to multi sector vehicles, these funds

operate across the assets spectrum compared to their single sector peers. It therefore takes GPs longer to execute on their strategy. Target country wise, single country funds call in capital faster as they operate within one target country mandate and therefore, in practice, are able to execute on their strategy with a greater precision. Multi country vehicles, on the other hand, operate across multiple jurisdictions that can afflict asset acquisition and hence extend drawdowns schedule.

Critics, however, may argue just the opposite. Whereas multi country and multi sector vehicles have a greater universe to operate in, they should, hypothetically, be able to call in capital faster than their single strategy peers.

Figure 2 – Capital calls velocity for all funds



Capital call patterns

A multi country fund, for example, can use vehicle flexibility to refrain from investing in countries where assets are difficult to source and move into locations with a greater economic prospects thus avoiding declining markets and hence calling equity faster. Multi-sector vehicles can use the same flexibility to change vehicle sector weighting by acquiring assets in more promising sectors and thus fast-track capital calls schedule.

The recent INREV research, however, presents the case for specialisation and therefore indirectly supports single (country and sector) strategy advantage noted above. According to researchers, specialised non-listed real estate funds exhibit greater returns compared to their diversified peers. Funds' size, leverage, vintage, structure and style notwithstanding, researchers found that single sector single country funds performed most strongly, while multi sector multi country funds performed weakest over the research period. Commentators also acknowledged that specialised funds tend to have a greater market intelligence, asset selection ability and stronger network that are a bit more onerous to replicate for diversified funds.

Figure 3 – Capital calls velocity for single country funds

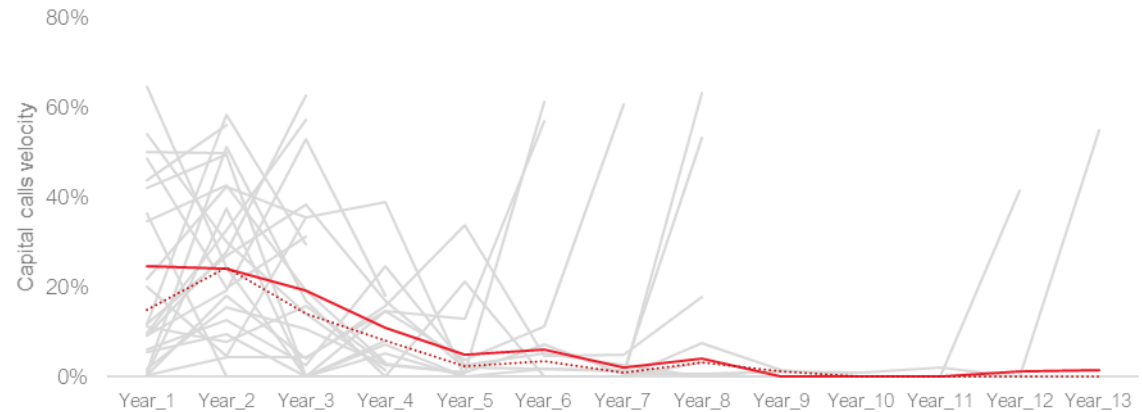
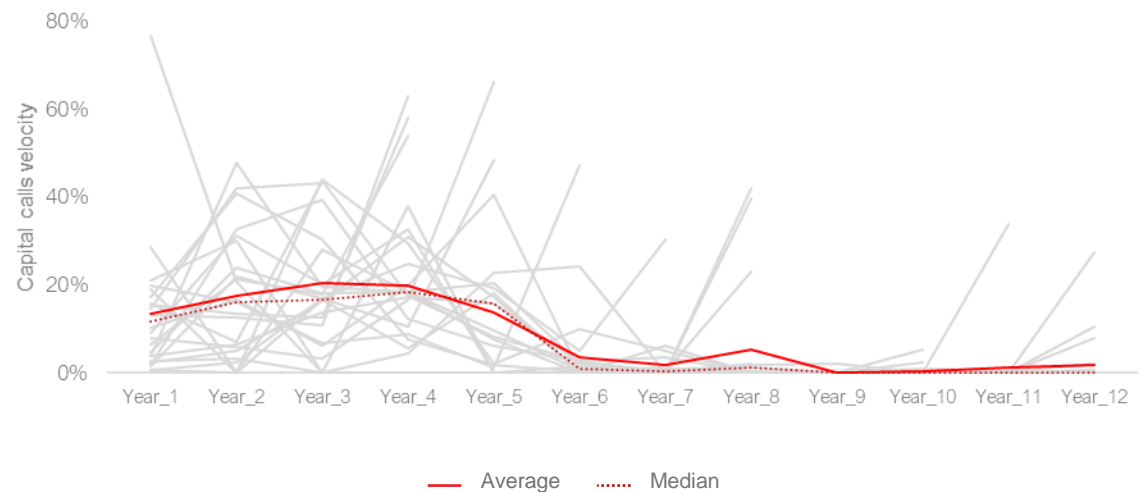


Figure 4 – Capital calls velocity for multi country funds



Simulation

Acknowledging that capital drawdown schedules are much more nuanced than averages suggest, series of Monte Carlo simulations were performed to further interpretation. In total 10,000 simulations were run for each vehicle strategy for each year, conditioned on the following dependence ⁷:

$$c = \int(x_{ij}, \bar{\mu}_j, \sigma_j) \tag{1}$$

$$x_{ij} \rightarrow i = \begin{bmatrix} i_{1,1} \dots \dots i_{1,j} \\ \dots \dots \dots \\ i_{10000,1} \dots \dots i_{10000,j} \end{bmatrix} \tag{2}$$

$$\bar{\mu}_j = \sum_{i=1}^n (\mu_{ij}) \tag{3}$$

$$\sigma_j = \sqrt{\bar{\mu}_j/n} \tag{4}$$

Where *c* is simulated capital calls velocity, *x_{ij}* is random number that deviates from 0% to 100%, $\bar{\mu}_j$ is mean capital call velocity, σ_j is standard deviation, *n* is number of funds in the sample and *j* duration of capital calls as expressed by the number of years.

Overall, simulation results match average sample estimates. Computed single sector, single country and value added vehicles call in capital faster and exhibit greater capital calls velocity compared to their multi country, multi sector and opportunity peers. The former group of funds call in the bulk of

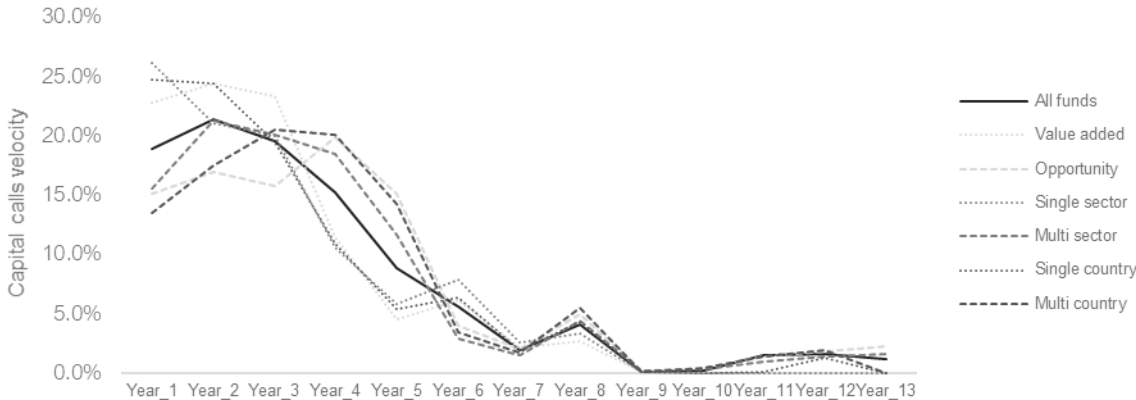
all capital in first three / four years of the fund life. The latter group has a more moderate capital call schedule still calling around 15% of commitments in year five of the fund life.

Considering a somewhat common investment period of four years among non-core real estate funds, as a group, APAC non-listed real estate funds call in 76.3% of committed capital in total. Value added vehicles draw 82.9% of investors' capital during that period what compares to 67.7% for opportunity funds. Single sector funds draw 77.4% of committed capital, while multi sector vehicles call in 75.2% of investors capital during the same time frame. Single country and multi country funds draw down 79.6% and 72.0%

of committed capital during the first four years of funds life respectively.

However, it is important to note a standard deviation heterogeneity of drawdowns between the two fund categories. Although value added, single sector and single country funds exhibit accelerated capital calls velocity, standard deviation of these calls is also greater. On the other hand, while multi country, multi sector and opportunity funds call in capital slower, capital calls dispersion among this group of fund is lesser. In other words, value added, single sector and single country funds call in investor capital faster however with less certainty. Multi country, multi sector and opportunity funds call in capital slower however with a superior precision.

Figure 5 – Simulated capital calls velocity for all funds



Summary

An impossible task of successful prognostication has been a subject of notable debate in folklore and scholarly research. Despite numerous caveats that afflict forecasting, investors with private market allocations must engage in this practice. For those with non-listed real estate vehicles commitments, reluctance to forecast may pose notable challenges in running portfolios efficiently or assuring liquidity.

This current study assessed a typical capital calls velocity for closed end APAC non-listed (non-core) real estate funds. Some of the data and methodological limitations notwithstanding, both cursory data analysis and simulations suggest that funds exhibit a contrasting capital calls sequence. As a group, APAC non-core non-listed real estate funds call circa 76.3% of committed capital during the first four years of the fund life. However, single sector, single country and value added vehicles have a greater capital calls velocity compared to their multi sector, multi country and opportunity peers. Investors should therefore budget accordingly when choosing either of vehicle strategies to invest in.

References

¹ The Economist (2007) *The perils of prediction*.
Internet: <https://www.economist.com/books-and-arts/2007/05/31/the-perils-of-prediction>

² The Economist (2016) *Why forecasts are necessary*. Internet:
<https://www.economist.com/buttonwoods-notebook/2016/06/18/why-forecasts-are-necessary>

³ Sadi A. Assaf and Sadiq Al-Hejji (2006) *Causes of delay in large construction projects*.
International Journal of Project Management.

⁴ Dean Takahashi and Seth Alexander (2011) *Illiquid Alternative Asset Fund Modelling*. The
Journal of Portfolio Management.

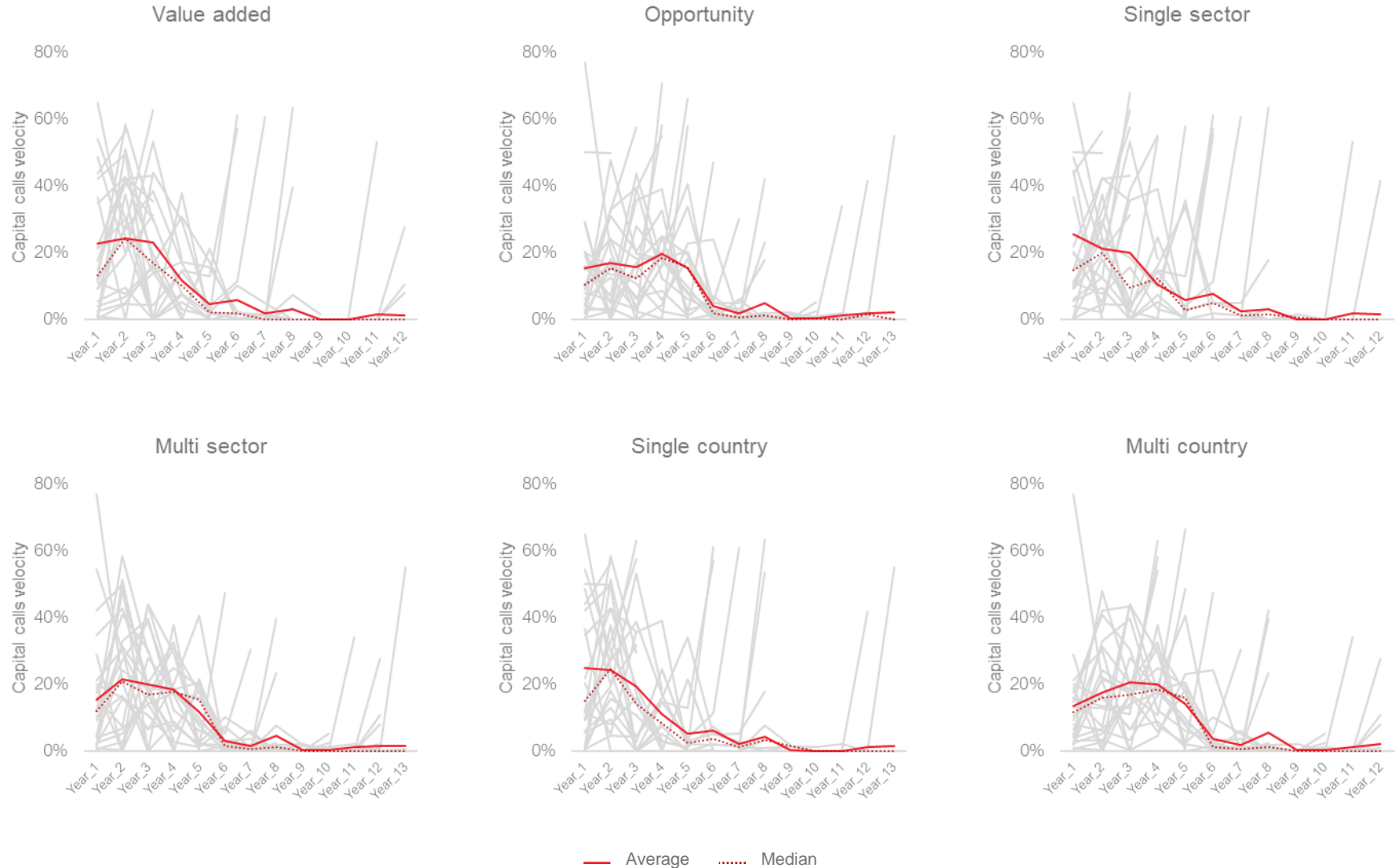
⁵ Burgiss (2018) *Modelling Cash Flows for Private Capital Funds*.

⁶ Nick Mansley, Zilong Wang and Franz Fuers (2018) Does specialisation lead to improved investment performance? INREV academic research.

⁷ Paul Glasserman (2003) *Monte Carlo Methods in Financial Engineering*. Springer-Verlag New York, pp.596.

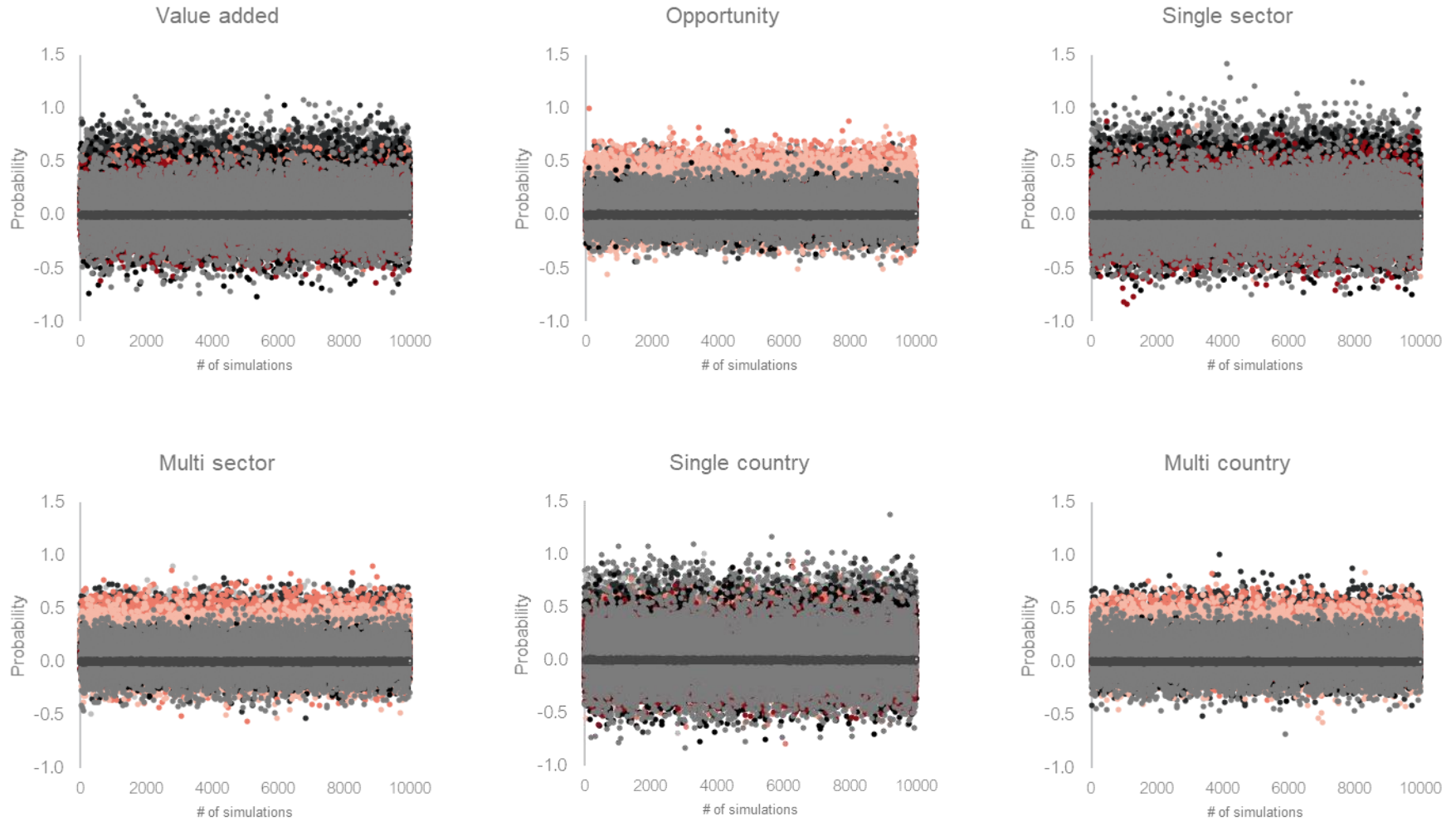
Appendix 1 – Capital calls velocity

Figure 6: Capital calls velocity for different fund strategies



Appendix 2 – Simulated capital calls velocity

Figure 7: Simulated capital calls velocity for different fund strategies



• Year_1 • Year_2 • Year_3 • Year_4 • Year_5 • Year_6 • Year_7 • Year_8 • Year_9

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