INREV

# Fund of Funds Study **2016**

Research

INREV is the European Association for Investors in Non-Listed Real Estate Vehicles. Our aim is to improve the accessibility of non-listed real estate vehicles for institutional investors by promoting greater transparency, accessibility, professionalism and standards of best practice.

As a pan European body, INREV represents an excellent platform for the sharing and dissemination of knowledge on the non-listed real estate industry.

INREV
ITO Tower, 8th floor
Gustav Mahlerplein 62
1082 MA Amsterdam, The Netherlands
+ 31 (0)20 235 8600 | research@inrev.org | www.inrev.org



# Contents

# Executive summary

- Fund of funds delivered the strongest performance yet
- Large fund of funds achieved the greatest growth rate in 2015
- Core outperforms non-core

This year's study shows that funds of funds remain an important vehicle in the non-listed real estate industry. This was a third consecutive year of growth for fund of funds indicating a notable post-crisis recovery in the funds of funds universe. Fund of funds achieved an annual return of 18.7% in 2015, delivering their greatest performance yet. Whether broken down by style, structure, target regional strategy, vintage or size, on aggregate fund of funds delivered positive returns. Certainly, performance varied vehicle by vehicle. However, as a group fund of funds exhibited healthy performance cementing their role in the non-listed real estate space.

'Fund of funds achieved an annual return of 18.7% in 2015, delivering their greatest performance yet'

Core, large and global vehicles outpaced the rest. Vehicles from these three categories (mutually exclusive) posted +20% returns in 2015. At the other end of the spectrum were non-core, small and fund of funds targeting Asia Pacific. Vehicles falling into the latter three categories generated modest returns (in case of small vehicles returns were negative) compared to their core, large and global peers.

Their significance is further heightened as funds of funds invest in a relatively high number of non-listed real estate products. According to the ANREV / INREV / NCREIF Fund Manager Survey 2016, funds of funds account for €20.7 billion or 1.3% of the gross asset value (GAV) of non-listed real estate AUM worldwide. Of the total €123.6 billion capital raised in 2015, as noted in the ANREV / INREV / NCREIF Capital Raising Survey 2016, 4.0% was raised for fund of funds. A percentage which is similar to the one reported in 2014, further emphasising a continued growth of the fund of funds universe.

However according to the ANREV / INREV / PREA Investment Intentions Survey 2016 published earlier this year, funds of funds were noted as the least preferred route by investors when asked how they expect to allocate capital to real estate.

In parallel, some managers are terminating their fund of funds businesses while others are steering their vehicle offerings towards a new direction. For some, the changes in regulatory and supervisory environment hinders the business. For others, vehicle proposition itself is the culprit especially with investors nowadays seeking greater control over their capital.

'Funds of funds remain an important vehicle in the non-listed real estate industry'

It is also interesting to note that over the last few years fund of funds managers have been renaming themselves as 'multi-managers' in order to reflect a more diverse investment approach they have been exercising: not only investing into funds but also into joint ventures, club deals and debt funds, to note but a few.

Some of these limitations notwithstanding, fund of funds continue to offer diversification benefits that individual funds cannot achieve. Their targeted investment strategy into different regions, styles, sectors as well as structures benefit investors with a limited capacity to access a broad spectrum of the real estate industry. This proposition can be further supported by the fact that 37.2% of all capital dedicated to vehicles with a global strategy went to funds of funds in 2015.

# Section 1

## Introduction

# Introduction

This is the fifth edition of the Fund of Funds Study. The study provides an overview of the fund of funds industry globally, including insights by target region, by style and structure and other associated characteristics, as well as detailed analysis of the performance of funds of funds.

For the second time, the study has an international outreach, and was conducted in conjunction with ANREV in Asia Pacific.

In total, ANREV and INREV Funds of Funds Universes (‘Universe’) contains 65 funds of funds that are managed by 30 managers. Collectively these vehicles represent a total Net Asset Value (NAV) of €9.6 billion. Eleven fund of funds indicated their preference to remain anonymous and therefore the online vehicles universe only shows 54 funds of funds.

Performance data was provided for 25 funds of funds managed by 11 fund of funds managers. With NAV of €6.5 billion this sample represents 67.5% of the total NAV of the funds of funds in the Universe.

The performance analysis in Section 2 is based on 25 vehicles unless otherwise stated. Section 3 is formed on the total number of funds of funds in the Universe unless otherwise stated.

It is important to note that the sample size and its composition varies year by year. As such, historical comparison should be treated with caution.

Aggregate annual performance results are presented only when a minimum of three funds of funds managed by three different managers is available. All returns are calculated by INREV. Performance figures are stated in local currency.

The performance data presented in this report is not intended to serve as a benchmark and should be used for research and information purposes only.

Performance figures in Section 2 are quoted as at 31 December 2015, while figures in Section 3 on the Universe are quoted as at the end of Q2 2016 unless stated otherwise.

# Section 2

## Performance of funds of funds

# Performance of funds of funds

## Aggregate annual performance of funds of funds

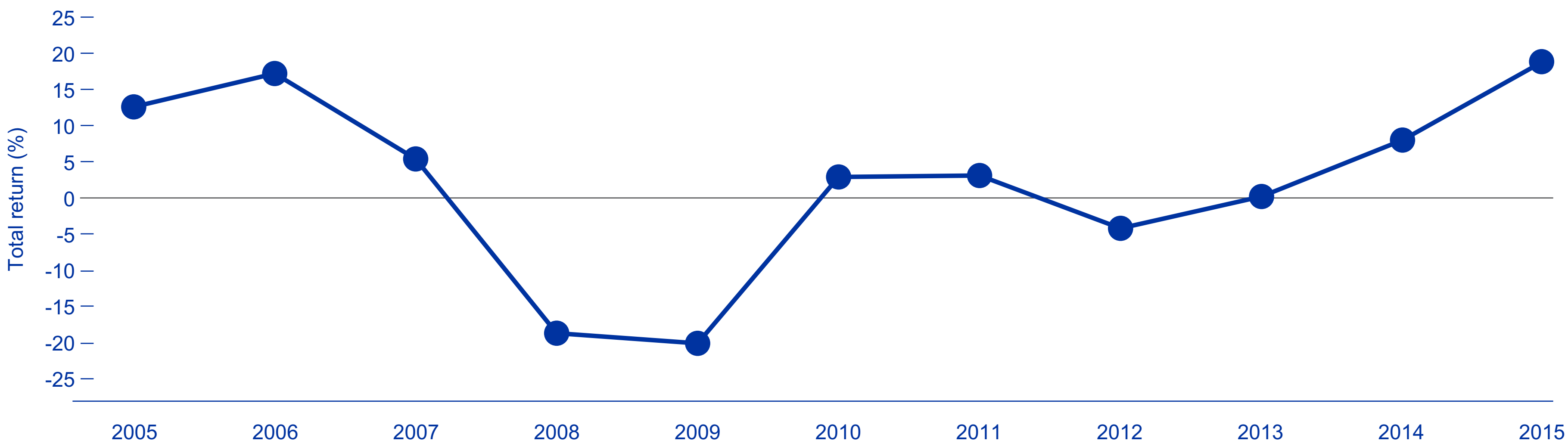
The following section is based on 25 fund of funds where performance figures were reported to INREV. Collectively, these fund of funds represent a total NAV of €6.5 billion. Summary statistics of these vehicles are presented in Appendix 1.

Last year was a good year for fund of funds. As a group they returned 18.7%, delivering the strongest performance yet. This was a third consecutive year of growth for fund of funds. All in all, the healthy performance indicates a recovery in the funds of funds universe since the global financial crisis hit the marker in 2008 and 2009.

Certainly, this growth has not been uniform. The range between the best and the least performing vehicles stands at 81.9% suggesting a significant heterogeneity in vehicles' performance.

'Last year was a good year for fund of funds'

**Figure 1: Aggregate annual performance of funds of funds**



## Performance of funds of funds by quartile

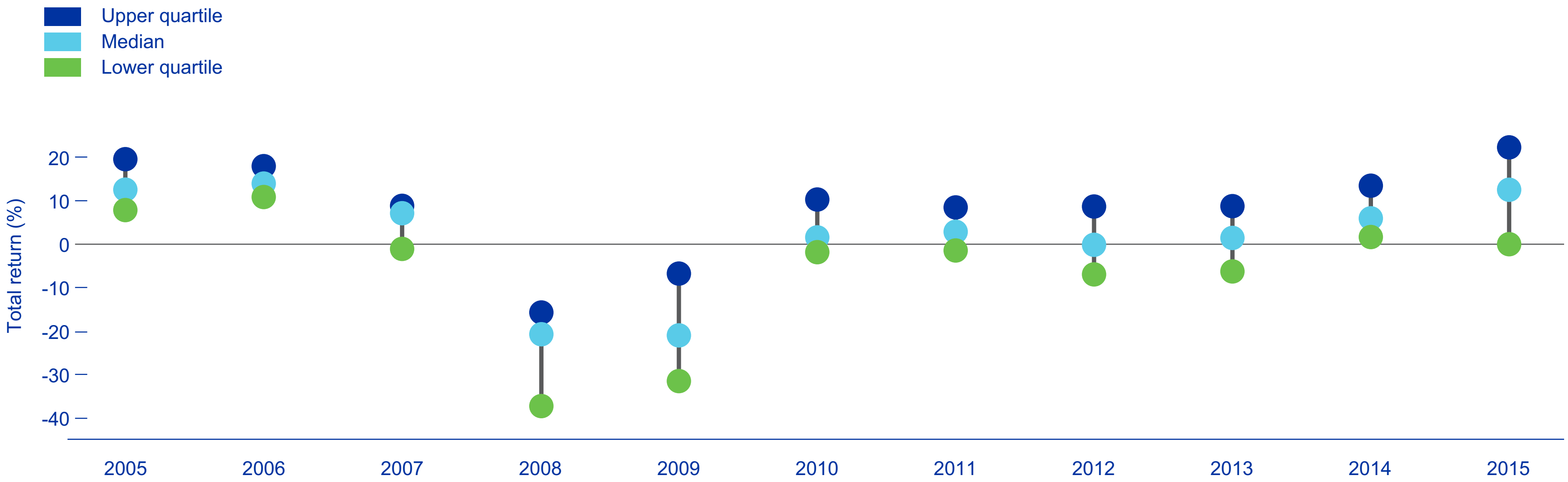
The asymmetry in individual fund of funds' performance is further emphasised when analysed by quartiles. The narrowing gap in the performance among upper and lower quartile funds of funds reversed last year.

In 2008 and 2009 increased volatility saw the widening of performance between lower quartile and upper quartile vehicles with ranges standing at 21.5% for 2008 and 24.7% for 2009. The spread came closer during the post-crisis period which stood in the range of 15.0% for 2012 and 2013, though still significant. In 2014 the difference in returns between upper and lower quartile vehicles narrowed to 11.9%, and widened again this year to 21.9%.

In 2015, however, fund of funds, regardless of their quartile position, saw an overall improvement in their performance. The upper quartile funds of funds achieved a total annual return of 22.2%. Their inter-quartile equivalents generated 12.3% and lower quartile vehicles returned 0.3%.

'All vehicles, regardless of their quartile position, saw an overall improvement in their performance'

**Figure 2: Performance of funds of funds by quartile**



## Performance of funds of funds by style

Considering fund of funds performance by style, value added and opportunity vehicles were grouped into a broader 'non-core' category for this analysis.

All in all, the performances of core and non-core funds of funds have been moving in the same direction over the past seven years. The same trend continued into 2015. Core funds returned 20.4% while non-core generated 13.4%.

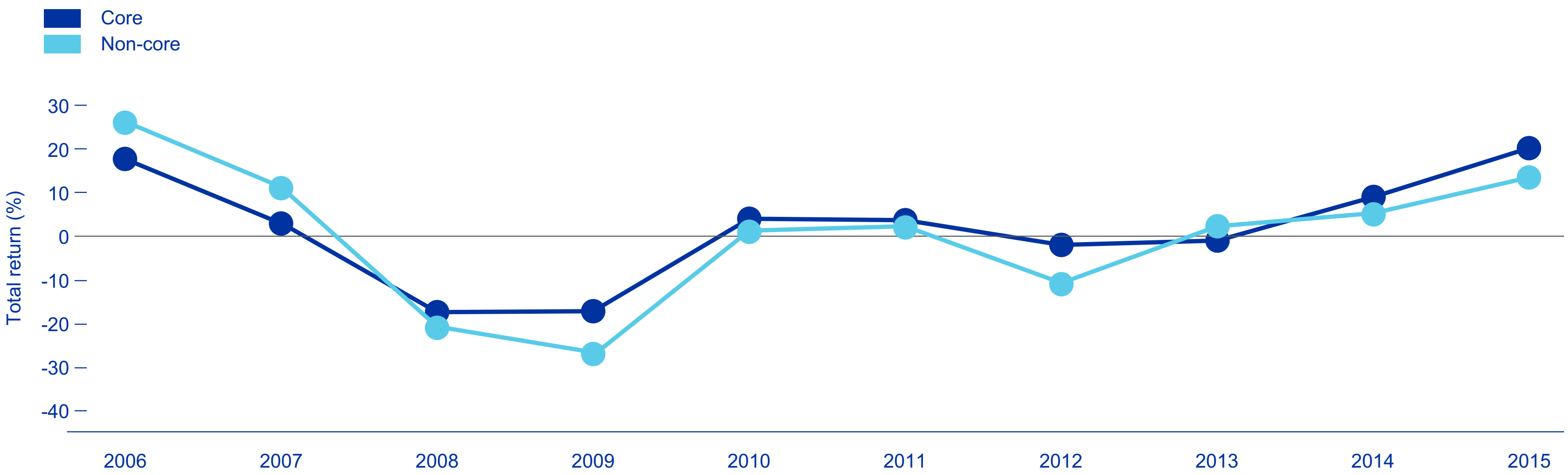
What is more, over the last few years the downside volatility in non-core funds of funds has been greater than that of their core peers. This potentially suggests that core vehicles have a greater cushion against market downturns than non-core ones.

It is interesting to note that core fund of funds outperformed non-core vehicles for most of the research period. Certainly, there were instances when the trend reversed with non-core vehicles beating core fund of funds. However, taken as a whole, core funds of funds generated greater returns to their investors compared to non-core vehicles.

It is worth noting however that core and non-core fund of funds complement each other and should not be seen as being rivals. Investors have flexibility and discretion to choose between both styles to achieve their investment aims.

'Core funds of funds generated greater returns to their investors compared to non-core vehicles'

**Figure 3: Performance of funds of funds by style**



## Performance of funds of funds by structure

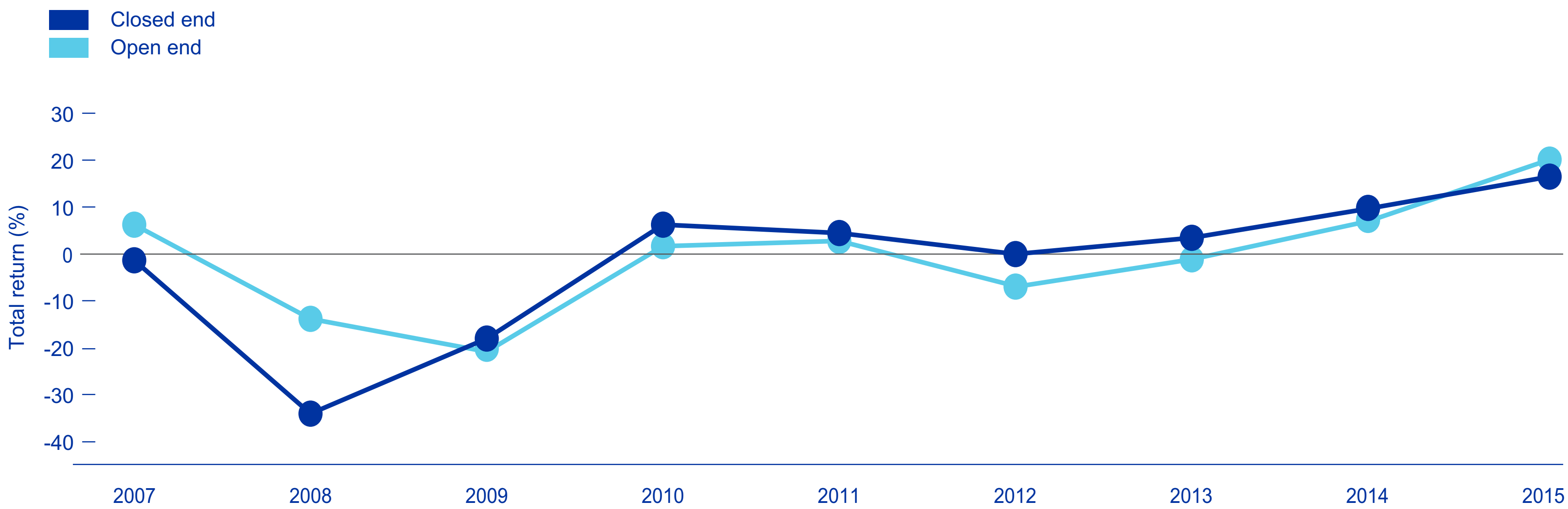
Further analysis scrutinises funds of funds performance by structure. As previous INREV reports have shown, closed end funds of funds were more likely to outperform open end funds of funds in the post-2009 period.

The trend however reversed in 2015. For the first time in seven years open end fund of funds marginally outperformed closed end vehicles. Last year, closed end vehicles delivered 16.1% while open end vehicles returned 19.4%, a mere 2.8% gap between the two structures.

It is interesting to note however that closed end vehicles were steadier in their performance over the last decade. As a group, they have not entered a negative territory since 2010 while open end fund of funds were in the red in 2012 and 2013.

'For the first time in seven years open end fund of funds marginally outperformed closed end vehicles'

**Figure 4: Performance of funds of funds by structure**



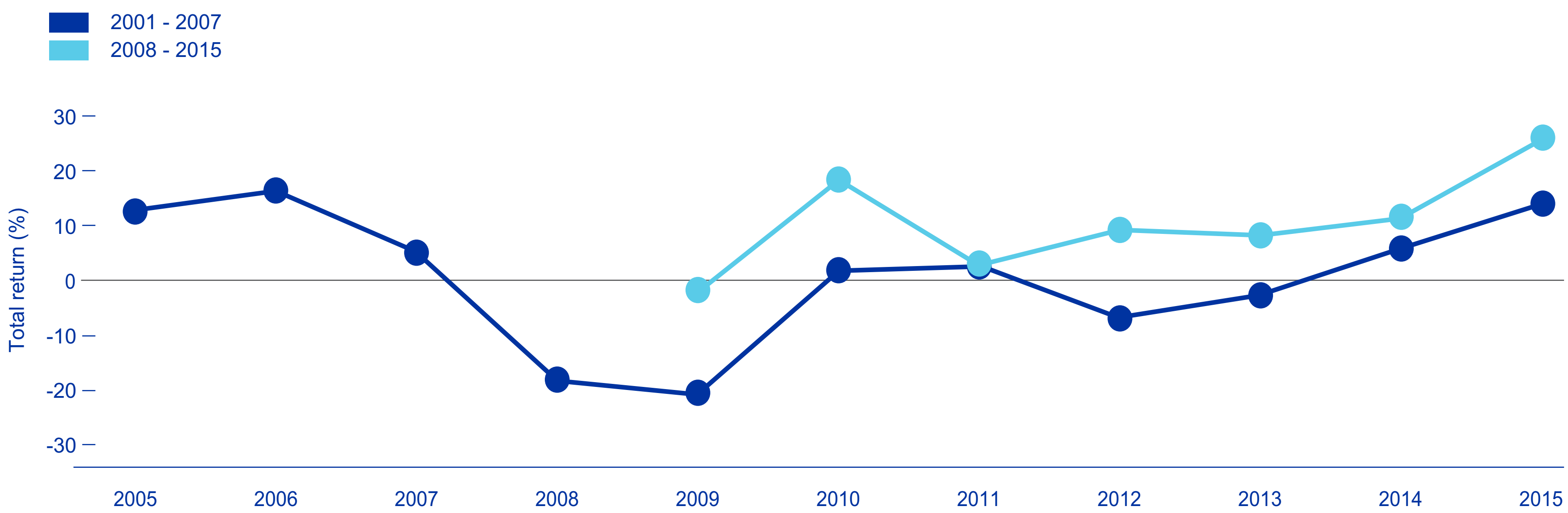
## Performance of funds of funds by vintage year

For the analysis by vintage the sample has been split into two broad categories: vehicles with a vintage prior to 2008 and vehicles with a vintage from 2008 onwards.

Fund of funds which came onto the market after 2008 continued their superior performance compared to vehicles launched prior to 2008. The former fund of funds started on the negative note in 2009 when as a group they returned -2.4% to their investors. Since then, this group of fund of funds have generated positive returns achieving record levels in 2015 of 25.7%.

The latter category of vehicles were also in the black. In 2015, fund of funds with a vintage year prior to 2008 generated the highest ever returns of 13.8%. This also was the second consecutive year of positive performance for fund of funds launched pre-2008.

**Figure 5: Performance of funds of funds by vintage year**

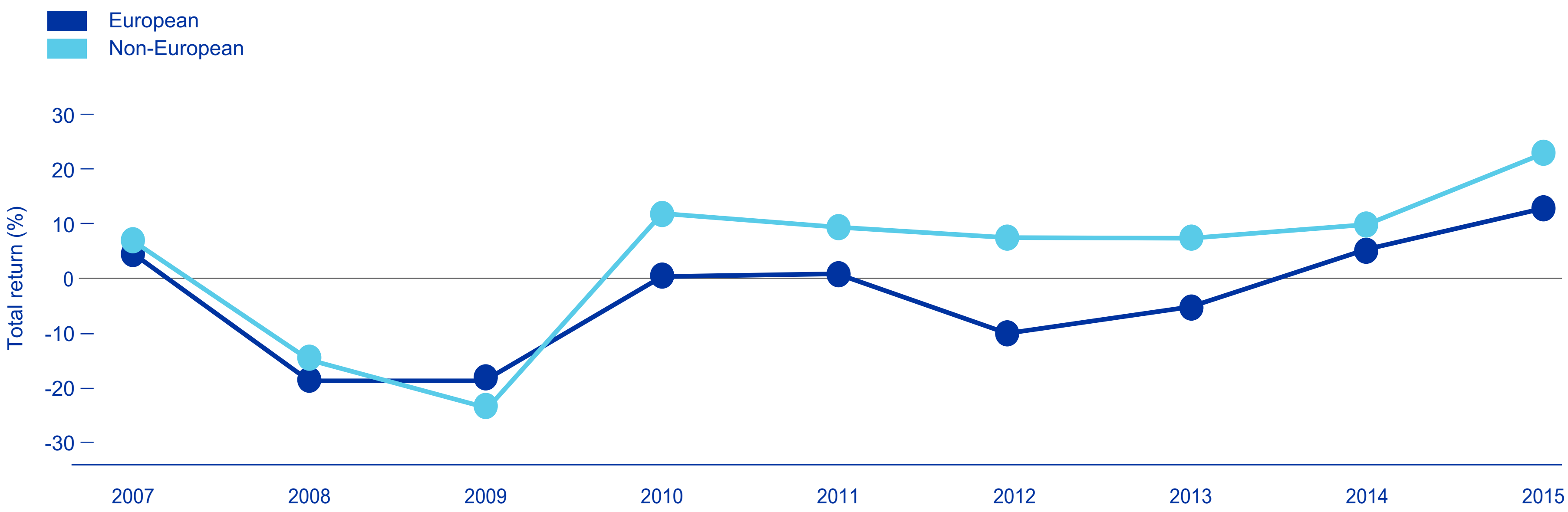


## Performance of funds of funds by target region

This sections looks into funds of funds performance by target region. The sample is firstly separated into two categories, those targeting Europe and those targeting non-Europe, with the latter category including Asia Pacific, North American and global strategies. Secondly, performance by target regional strategies is presented. Although fund of funds targeting North America were excluded from the analysis due to a limited sample.

Since 2007 funds of funds targeting non-Europe have enjoyed greater fortunes compared with European vehicles. The trend lasted for two years. It then reversed in 2009 with European fund of funds overtaking their non-European peers. In 2010, non-European fund of funds picked up on their performance and ever since surpassed the performance of vehicles targeting Europe. In 2015 non-European fund of funds returned 22.9% while European fund of funds returns stood at 13.0%, a notable 9.9% difference between the two vehicle categories.

**Figure 6: European vs Non-European funds of funds' performance**

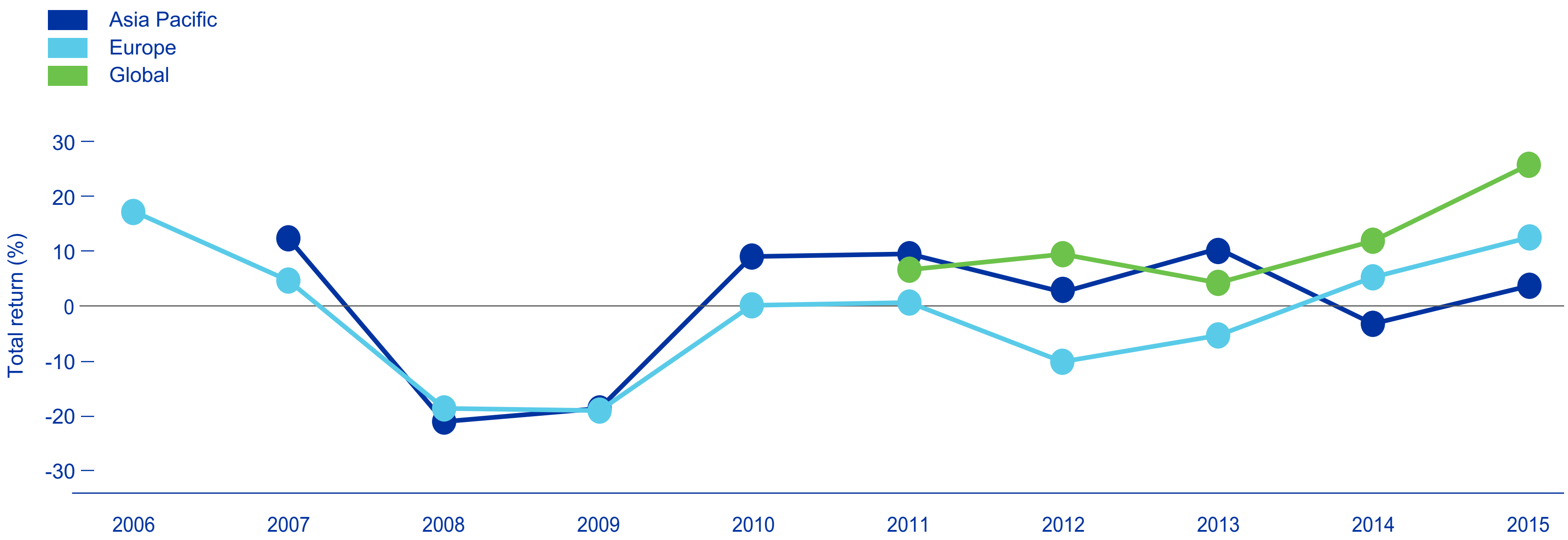


A more granular look into regional performance presents some interesting findings. All three regional strategies moved in the same upward direction in 2015.

Global vehicles saw the largest growth returning 26.0% last year, a second consecutive year with double-digit growth. Fund of funds targeting Europe generated 13.0%. Vehicles with an Asia Pacific mandate experienced a comparatively modest growth of 3.7%, however a notable improvement from the levels achieved in 2014.

> 'All three regional strategies moved in the same upward directions in 2015'

**Figure 7: Performance of funds of funds by target region**



## Performance of funds of funds by size

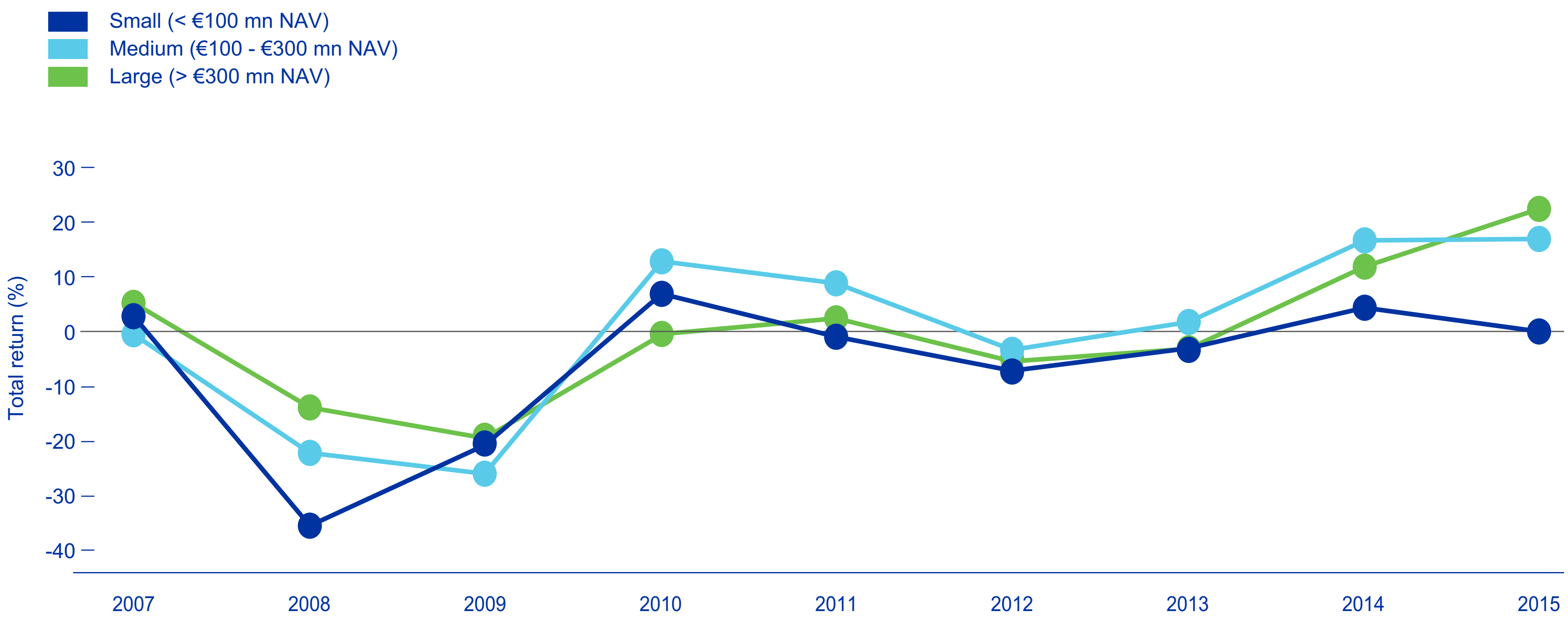
This section looks into fund of funds performance by size. Vehicles are divided into three categories: small with NAV less than €100 million; medium with NAV in the range of €100 - €300 million; and large with NAV greater than €300 million.

Overall all fund of funds generated positive returns except the smaller ones. The larger funds of funds registered the greatest growth rate in 2015. As a group, large fund of funds returned 22.1% last year. Medium-sized vehicles also saw a notable uplift in their performance generating 17.2% returns. Small vehicles were in the red returning -0.2% in 2015, significantly poorer performance compared with their medium and large peers.

In general, three categories experienced a rather homogenous performance especially after 2011. However, the picture changed last year with large vehicles starting to take the lead in performance and shooting upwards and small fund of funds diving south.

> ‘Large vehicles starting to take the lead in performance’

**Figure 8: Performance of funds of funds by size**



# Section 3

## Characteristics of funds of funds

# Characteristics of funds of funds

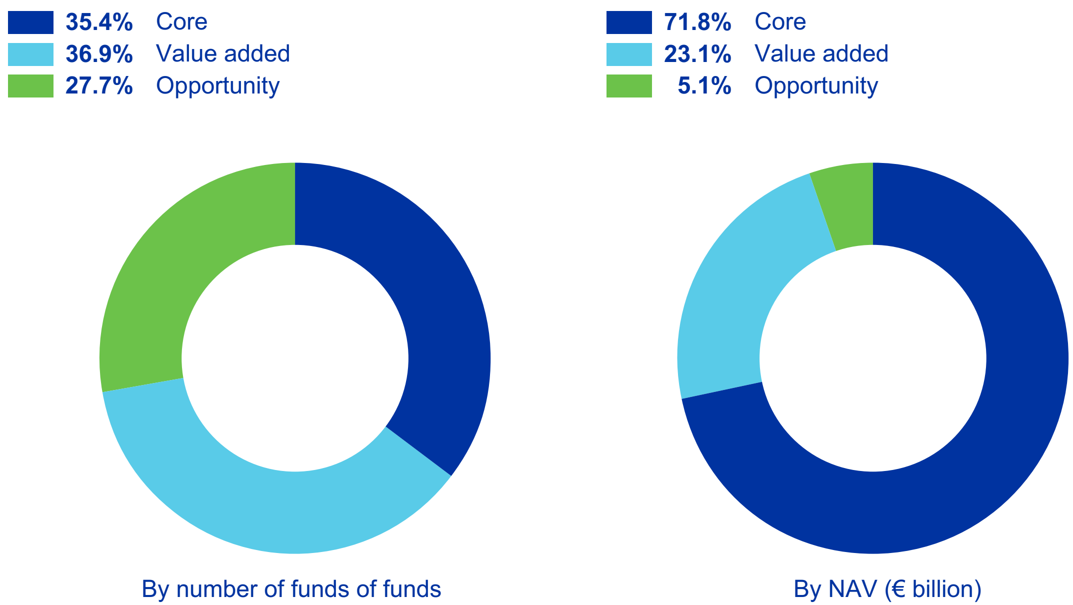
**The analysis in this section is based on the Fund of Funds Vehicles Universe, comprised of 65 funds of funds which collectively represent NAV of €9.6 billion. Eleven funds of funds indicated their preference to remain anonymous, therefore the online Vehicles Universe displays details for 54 funds of funds only.**

## Style and structure

In terms of style composition the funds of funds universe is almost evenly distributed among core, value added and opportunity vehicles, with value added just slightly ahead representing 36.9% of the total number of 65 vehicles. Core vehicles come next comprising 35.4% while the remaining 27.7% is made up of opportunity.

However, by size the NAVs tell a different story. Core vehicles make up the largest share of total NAV (71.8%).  At the opposite end of the scale opportunity funds of funds account for the lowest share, representing just 5.1%, while value added vehicles make up the remaining 23.1%.  This indicates that on average core funds of funds are much larger in size than value added or opportunity vehicles.

**Figure 9: Funds of funds by style**

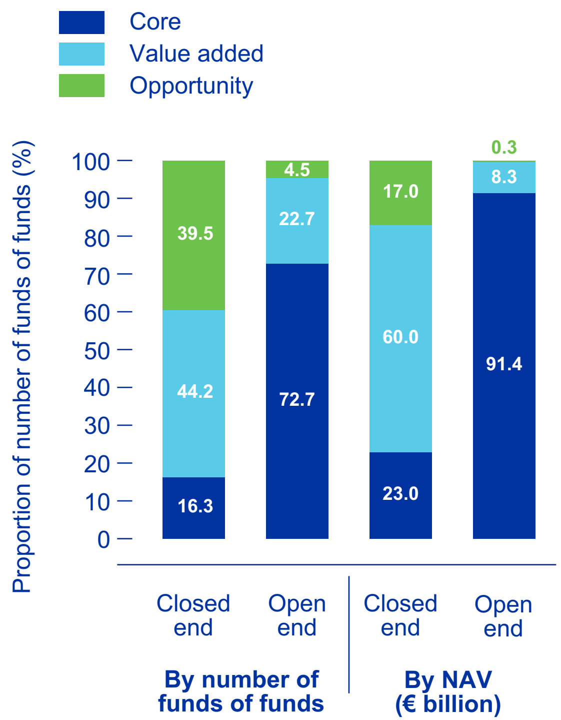


By number, open end funds account for 33.8% of the fund of funds market, accounting for 71.4% of NAV. Their market size is nearly triple that of closed end funds which represent 28.6% of NAV.

The style preferences for funds of funds in each structure are consistent with the preferences revealed in the ANREV / INREV / NCREIF Capital Raising Survey 2016. In NAV terms, open end funds of funds are 91.4% core in style, 8.3% value added and 0.3% opportunity. Number wise, the split is as follows: core – 72.7%, value added – 22.7% and opportunity – 4.5%.

For closed end funds of funds there is a different pattern: the bulk (60.0%) of NAV follows a value added strategy with the remaining 23.0% following core and 17.0% opportunity. With regards to number of vehicles, the majority of closed end fund of funds are value added (44.2%) with the remaining 55.8% of vehicles being split between core (16.3%) and opportunity (39.5%).

**Figure 10: Funds of funds by style and structure**



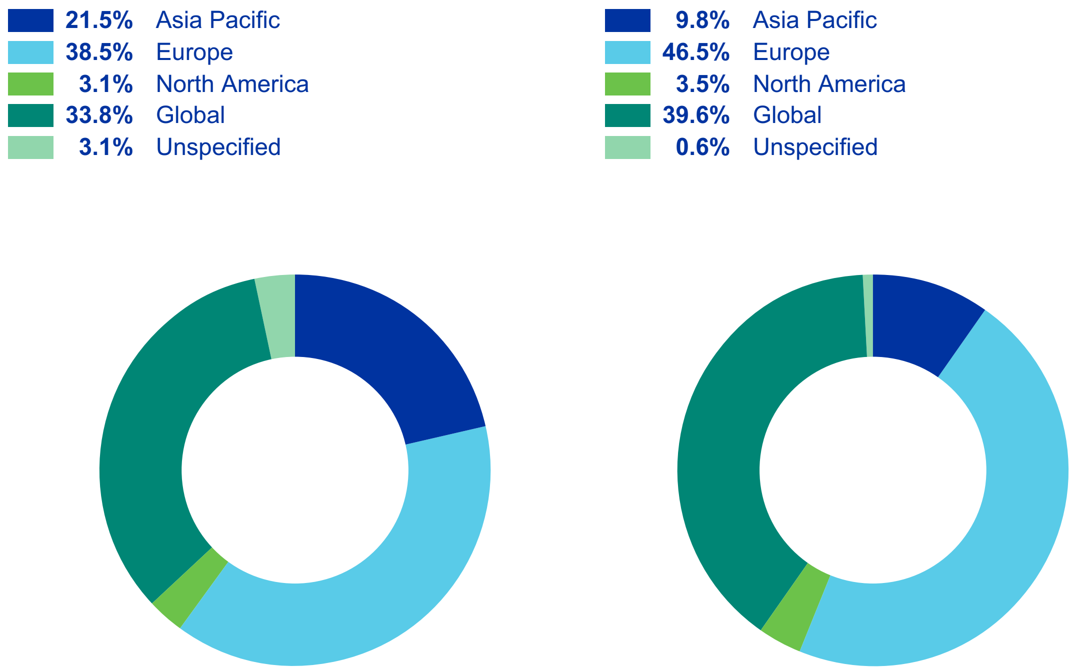
## Target region

Vehicles with a European or global strategy make up the largest share of funds of funds in the universe, 38.5% and 33.8% respectively. Funds of funds with an Asia pacific strategy follow next, representing 21.5% of the vehicles universe while only 3.1% have a North American strategy. Two vehicles have their target region strategy unspecified.

In terms of size, vehicles with a European or Global strategy also dominate representing 86.2% of total NAV. The remaining 13.8% of NAV is split between Asia Pacific (9.8%), North America (3.5%) or were unspecified (0.6%).

This comparison suggests that the average size of European and Global vehicles is much larger than the average size of vehicles with any other regional strategy.

**Figure 11: Funds of funds by target region**

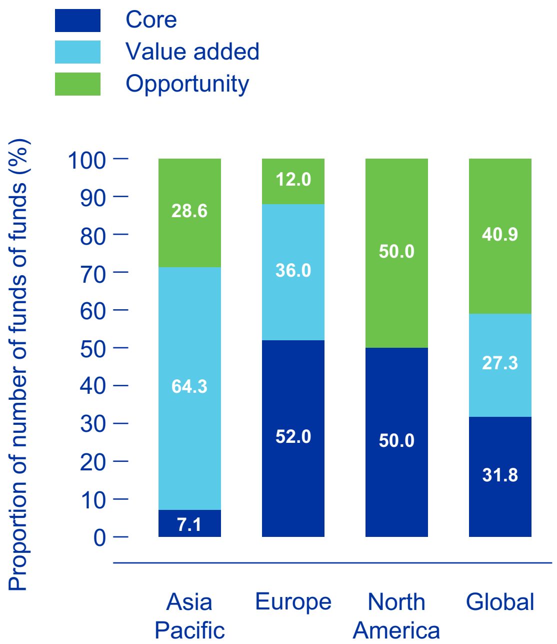



By number of funds of funds

By NAV (€ billion)

When looking at regional strategy by style there are distinct variations across the regions. Of the total number of funds of funds focusing on European markets, 52.0% have a core strategy while 36.0% are value added and 12.0% are opportunity. The opposite is true for Asia Pacific where 92.9% of vehicles have a non-core mandate. Vehicles with a global mandate are also mostly targeting the non-core space (68.2%). The investment style of North American-focused funds of funds is equally split between core and opportunity (50.0% each).

**Figure 12: Funds of funds by target region and style**




Note: The sample is comprised of 63 vehicles.

‘Of the total number of funds of funds focusing on European markets, 52.0% have a core strategy’

## Vehicle launches

Core funds dominated the fund of funds market during its marked expansionary phase from the late 1990s to 2005. In 2005 opportunity and value added funds of funds entered the market, and by 2007, when the number of new funds of funds launched reached its peak of 17, non-core styles dominated.

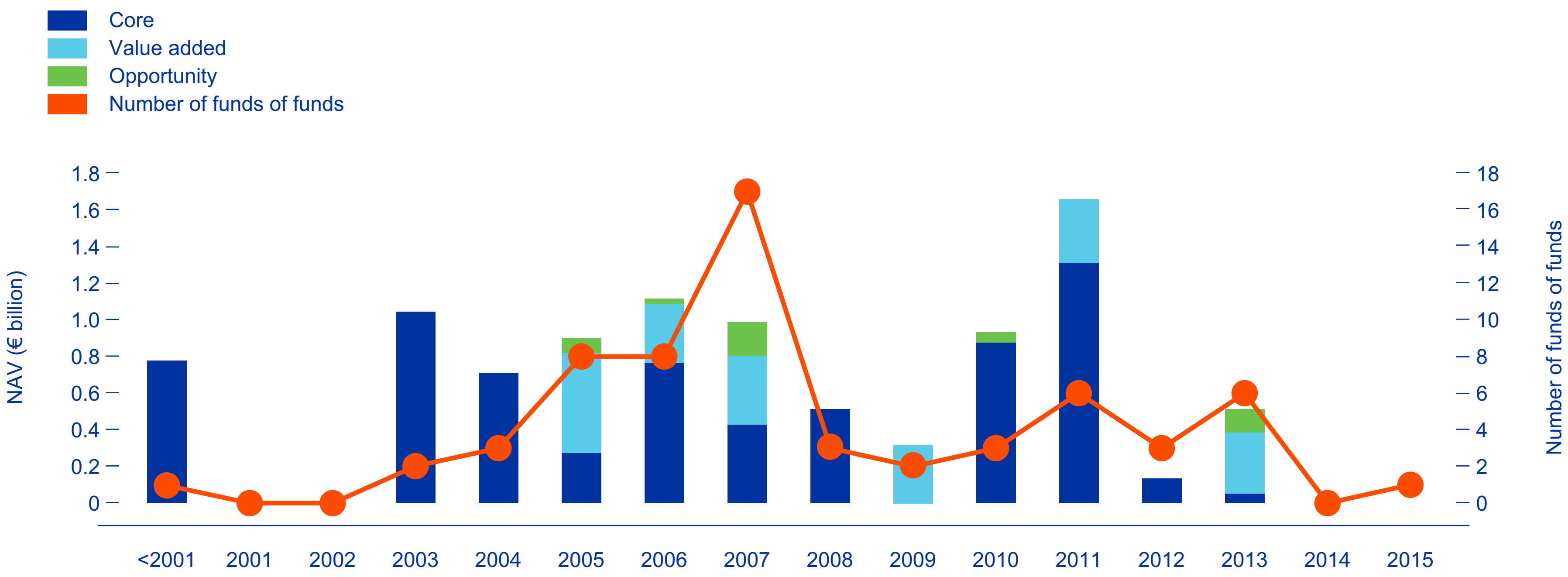
Following the financial crisis, core was the preferred strategy, although value added and opportunity funds of funds maintained a presence in the market.

Looking back at launches since the financial crisis, there were two funds of funds launched in 2009 and both have a value added mandate.  Moving on to 2011, six funds of funds were launched and this generation of vehicles was largely core in strategy.

The pendulum swung back again in 2013, when new funds of funds were mostly of non-core strategy and core vehicles represented only 9.5% of the total NAV.

The most recent launch figures of the past five years show that core style is most in vogue.

**Figure 13: Vehicle launches**




Note: The sample is comprised of 63 vehicles representing a total NAV of € 9.6 billion.

## Minimum fund life

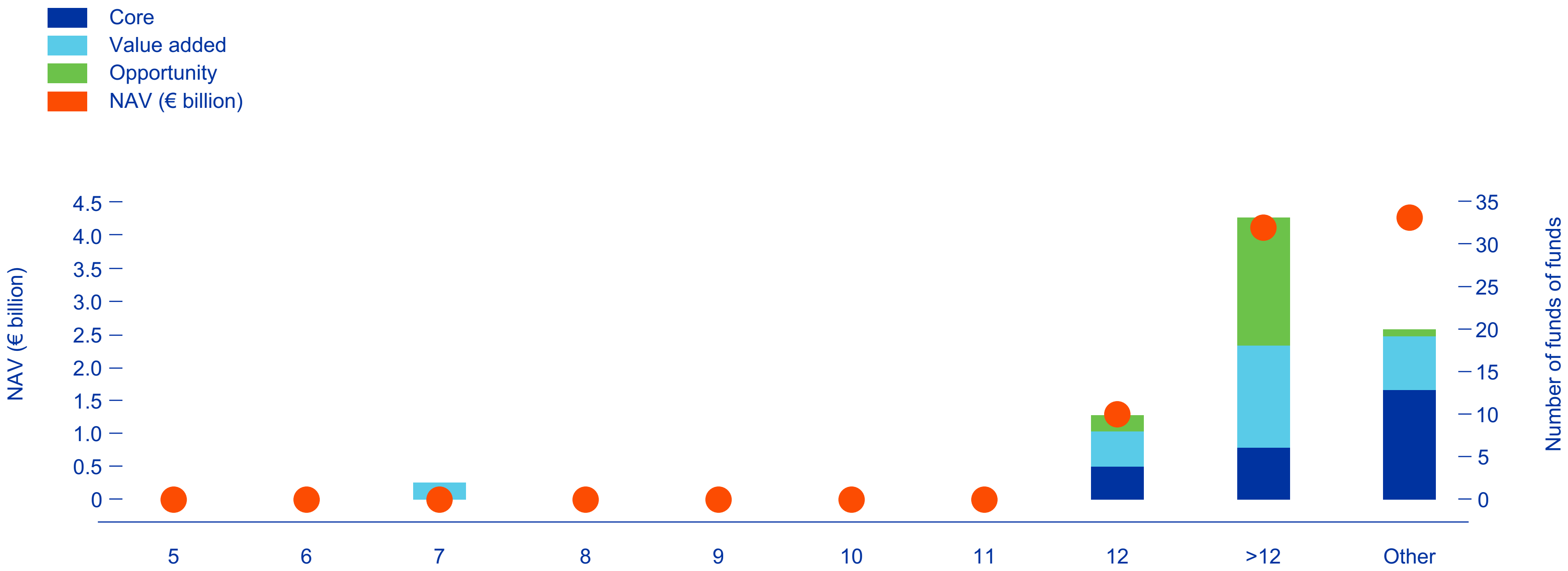
As noted above, the majority of funds of funds (65.6%) in the universe have a closed end structure and therefore are intended to have a fixed fund life. By number, a minority (3.1%) of funds of funds have a minimum fund life between 5 and 10 years. A majority have a fund life of at least 12 years and beyond: 12 years - 15.4%; more than 12 years - 50.8% years. Just under a third (30.8%) of fund of funds in the universe have their fund life unspecified.

Interestingly, there are differences in the minimum fund life across investment styles. Vehicles with a fund life of 12 years have an even split between core and value added (40.0% each) with the remaining 20% being opportunity. Collectively these vehicles amount to € 1.3 billion of NAV. Conversely, vehicles with a life period greater than 12 years are mostly non-core (81.8%) with the remaining 18.2% being core. Together, these vehicles represent €4.1 billion or 42.7% of the sample NAV.

It is therefore possible to suggest that funds of funds have a typical life span exceeding 12 years, especially those that are non-core.

‘Funds of funds have a typical life span exceeding 12 years, especially those that are non-core’

**Figure 14: Minimum fund life**



## Planned termination year

Over the next 10 years (including vehicles with termination scheduled for 2015) 40 funds of funds are due to terminate. This represents € 2.7 billion or 28.4% of the total NAV. During this decade, the distribution of planned terminations sees a peak coming in 2019 when 11 funds of funds are expected to terminate accounting for € 1.1 billion.

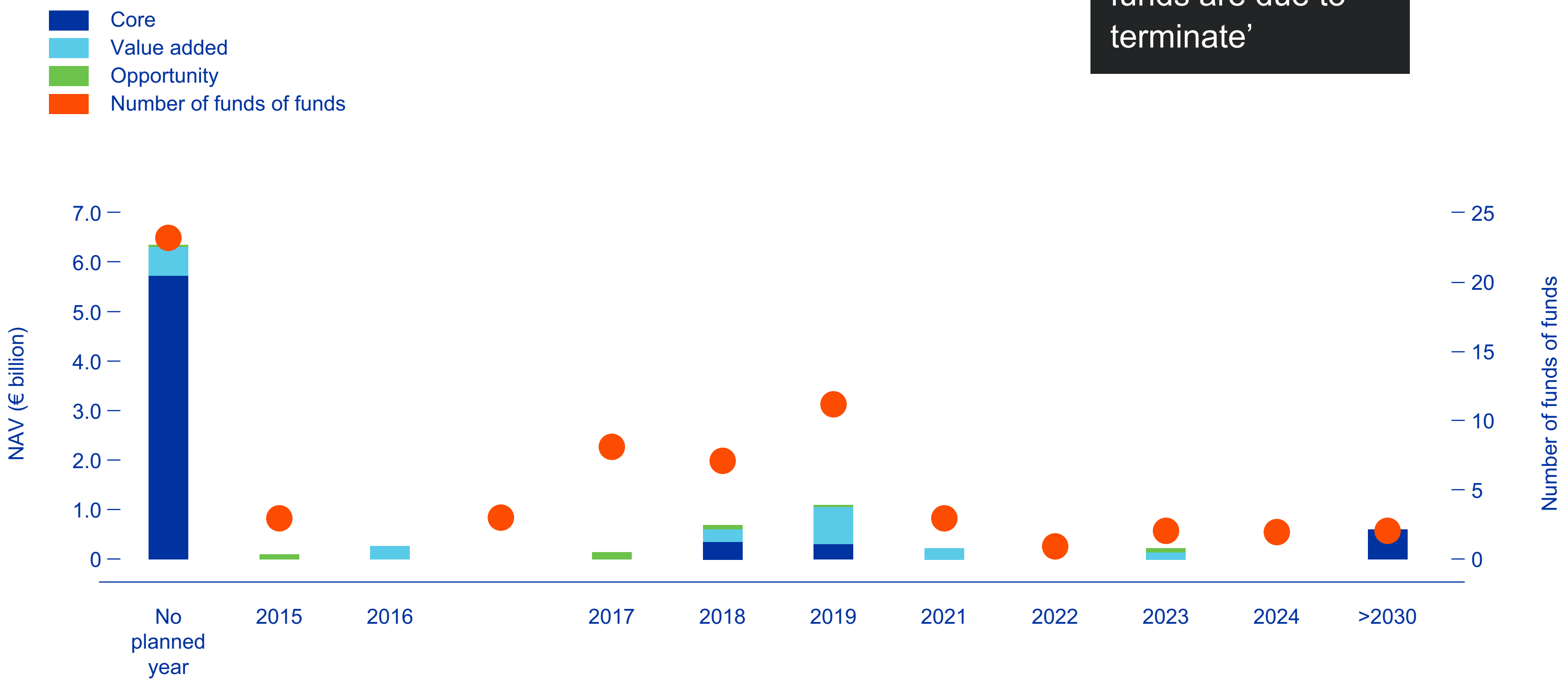
Thereafter the next notable fund of funds termination is expected after 2030 with 2 vehicles scheduled to terminate which represent 6.3% of the total NAV and €0.6 billion in value.

However, 23 vehicles (or 35.4% funds of funds) have no planned termination year, mainly because they have an open end structure with an infinite life span. These funds of funds make up €6.3 billion or 65.5% of the total NAV. Of those 23 funds of funds 66.7% are core and represent NAV of €5.7 billion. The remaining 8 are non-core with €0.6 billion NAV.

Of all vehicles with a specified termination year, value added funds of funds hold 23.1% of the NAV while core and opportunity funds of funds account for 71.8% and 5.1% of the NAV respectively. All value added funds with a termination date will be terminated by 2024.

‘A peak of terminations is expected in 2019 when 11 funds of funds are due to terminate’

**Figure 15: Planned termination year**



## Vehicle domicile

When looking at the domicile of fund of funds, Luxembourg is by far the preferred location, and this is consistent with the findings of the Funds of Funds Study in 2015. Nine or 42.9% of the fund of funds in the INREV Vehicles Universe which indicate their domicile are located in the Grand Duchy. Netherlands and UK follow next with 14.3% of funds of funds domiciled there. Next in line are Ireland and Spain (9.5% in each country).

**Figure 16: Vehicle domicile**

| | |
|---|---|
| **4.8%** | Germany |
| **9.5%** | Ireland |
| **42.9%** | Luxembourg |
| **14.3%** | Netherlands |
| **9.5%** | Spain |
| **4.8%** | Switzerland |
| **14.3%** | United Kingdom |

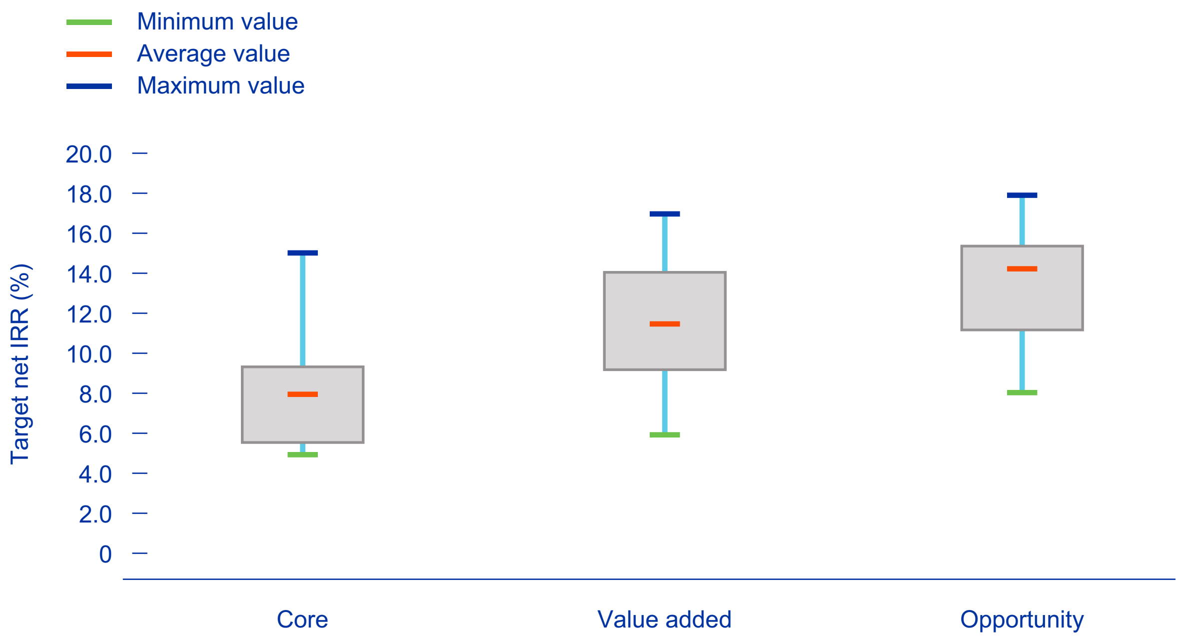
Note: The sample is comprised of 21 vehicles.

‘When looking at the domicile of fund of funds, Luxembourg is by far the preferred location’

## Target net IRRs

With their higher octane strategies, it comes as no surprise that opportunity funds of funds have the highest average target net internal rate of return (IRR) of 14.2% compared with 11.4% for value added and 7.9% for core funds. The smallest and the largest IRR values also significantly differ depending on vehicle style. The lowest IRR value for core strategy stands at 5.0%, it is 6.0% for value added strategy, and 8.0% for opportunity. With regards to maximum IRRs, values are as follows: 15.0% for core, 17.0% for value added and 18.0% for opportunity. It is interesting to note that the range of IRRs for all three strategies equates to around 10.0% with an inter-quartile range deviating from 3.8% for core, to 4.2% for opportunity and 4.8% for valued added strategies.

**Figure 17: Target net IRR**




* The middle ‘box’ represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 54 vehicles.

## Minimum target distribution yield

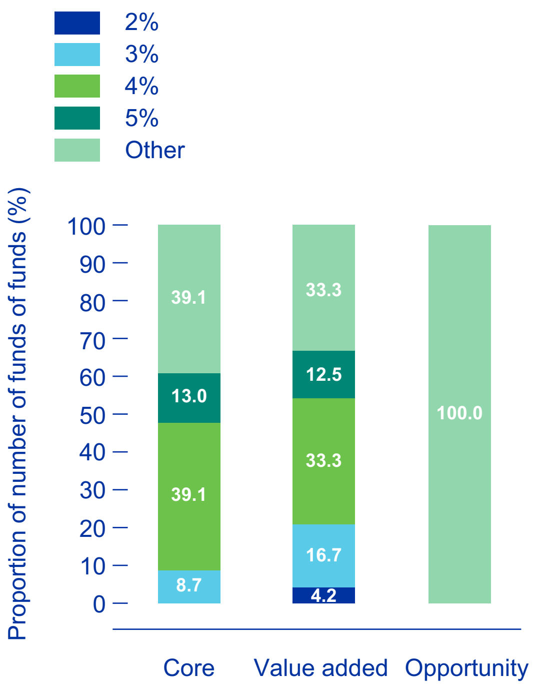
Over half (35 out of 65) of the funds of funds in the universe have not specified their target distribution yield. More than half of those vehicles (51.4%) are opportunity funds, with the remaining 48.6% being split between core (25.7%) and value added (22.9%).

Of the 30 vehicles that have provided their target distribution yield figures, 3.3% have indicated a minimum target distribution yield of 2.0%, while 20.0% of vehicles are targeting a 3.0% yield and the same proportion are targeting a distribution yield of 5.0%, with the remaining 56.7% of vehicles targeting 4.0% distribution yield.

Generally, core funds of funds have a higher target distribution yield due to a much higher income return component than value added funds. The majority of core funds of funds in the universe (39.1%) have a 4.0% minimum target distribution yield compared with 33.3% of value added funds.

By contrast, value added is the only style where some funds of funds (4.2%) have indicated a 2.0% minimum distribution yield.

**Figure 18: Minimum target distribution yield**



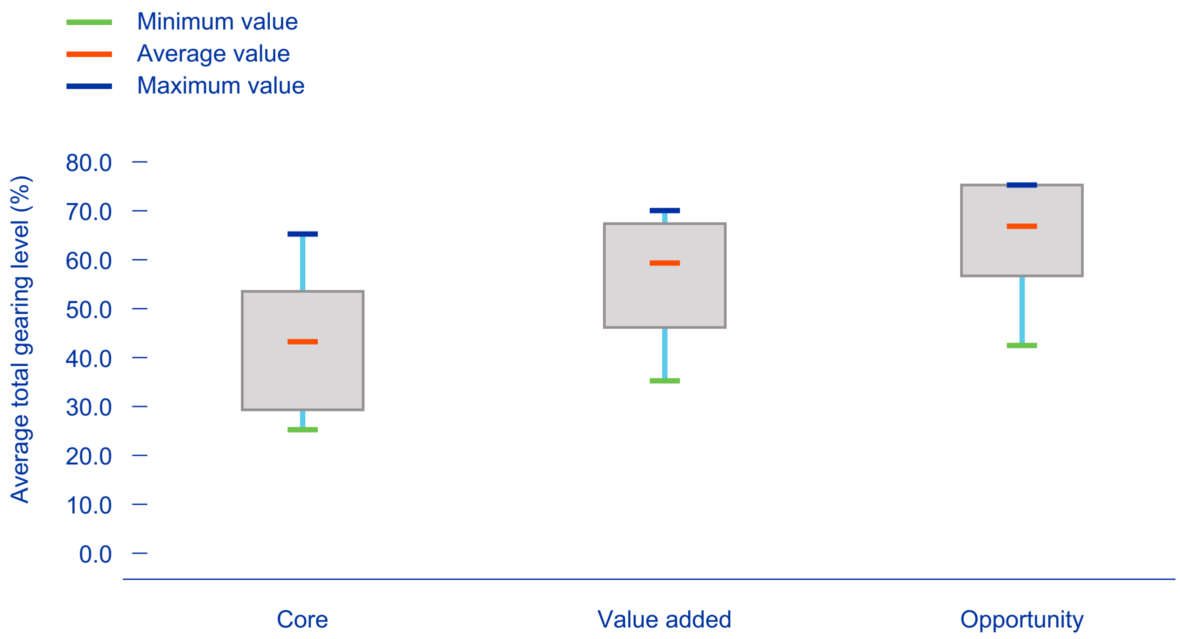
## Target average total gearing

Generally gearing levels for core are lower than value added, which are lower than opportunity.  This pattern is echoed in funds of funds. The majority of core vehicles have gearing levels ranging between 25.0% (min value) and 65.0% (max value), with the average being at 42.8%. Opportunity funds of funds have average gearing of 66.5%, with a minimum value of 42.5% and the maximum of 75.0%.  Meanwhile value added funds of funds have an average total gearing level of 59.0%, with the range between minimum of 35.0% and maximum of 70.0%.

Interestingly, core funds have the largest range (measured as a difference between the smallest and the largest values) of gearing levels compared to their value added and opportunity peers. The range for core vehicles is 40.0%, it is 35.0% and 32.5% for value added and opportunity vehicles respectively. The same picture emerges when inter-quartile values are compared. The inter-quartile range for core vehicles is 24.1%, it is 20.9% for valued added vehicles and 18.5% for opportunity fund of funds.

> ‘Core vehicles have the largest range of gearing levels compared to their value added and opportunity peers’

**Figure 19: Target average total gearing**



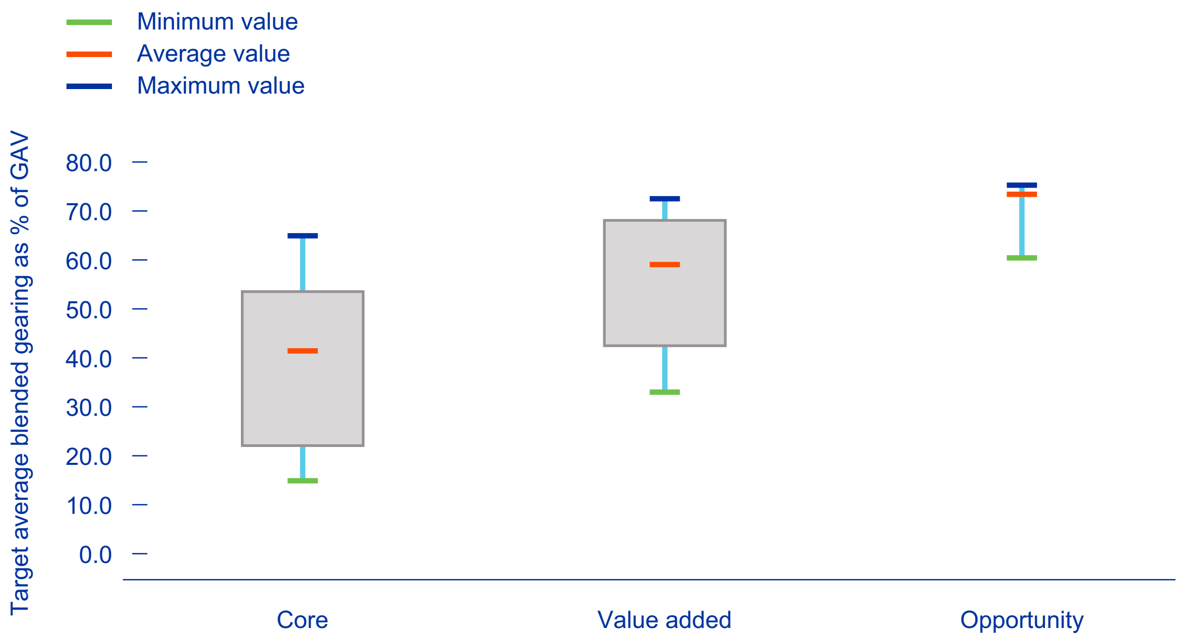

* The middle ‘box’ represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 44 vehicles.

## Target average blended gearing of vehicles

The majority of core funds of funds have an average target blended gearing level ranging from 15.0% to 65.0% as a percentage of GAV, with an average of 41.4%. Value added funds of funds have higher levels of blended gearing, averaging 58.5% with the minimum value of 33.0% and maximum value of 72.0%. As expected funds of funds with an opportunity strategy have the highest target average blended gearing level of 73.1%. Although these vehicles have the narrowest spread as measured by the difference between highest and lowest values, which stands at 15.0% compared to 39.0% for valued added fund of funds and 50.0% for core vehicles.

**Figure 20: Target average blended gearing of vehicles**




* The middle 'box' represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 43 vehicles; for opportunity vehicles the sample was insufficiently large to compute quartiles.

## Average size of commitments by style

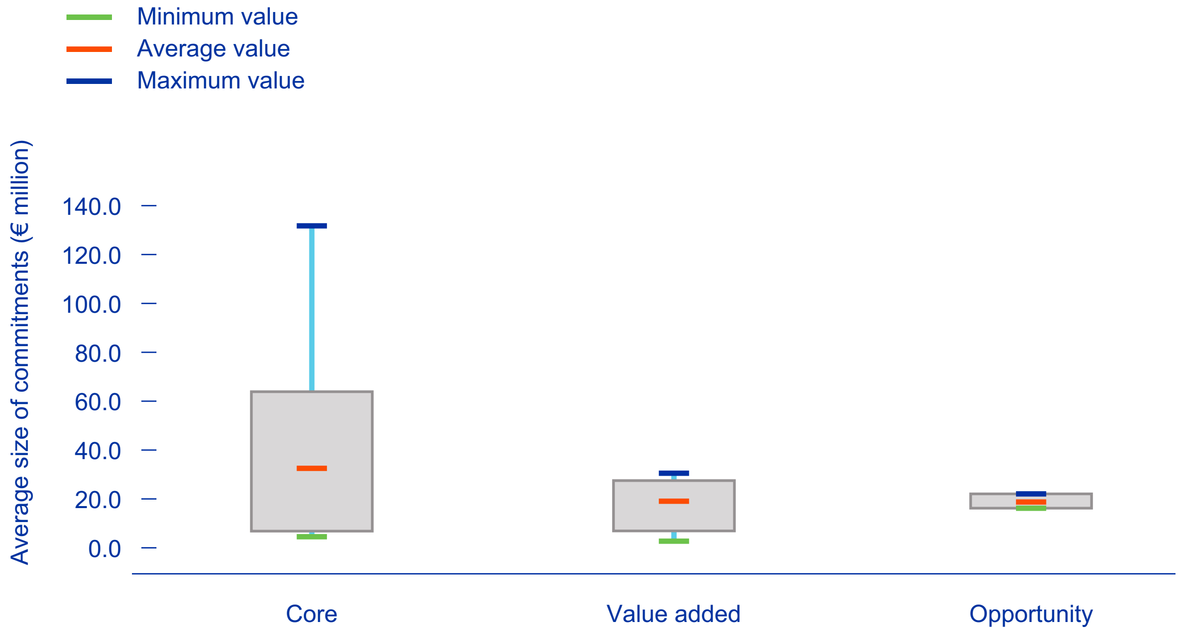
The average size of capital commitments for core funds of funds is larger than that of non-core. This is not surprising due to the size, low leverage levels and choices of investment that these funds make. On average, core funds of funds calls in €32.2 million of equity, while the average size of commitments for value added and opportunity vehicles is €19.5 million and €18.7 million respectively.

Commitments for core funds of funds have the largest range from €5.4 million to €132.0 million as expressed by min and max values, while the range for value added funds of funds is much smaller between €3.2 million to €30.0 million. As expected opportunity vehicles have the lowest range of commitments overall, from €16.6 million to €22.3 million.

The same picture emerges when the interquartile range is assessed. For core, it stands at €57.2 million, it is €20.8 million and €5.6 million for value added and opportunity vehicles respectively.

'The average size of capital commitments for core funds of funds is larger than that of non-core'

**Figure 21: Average size of commitments by style**



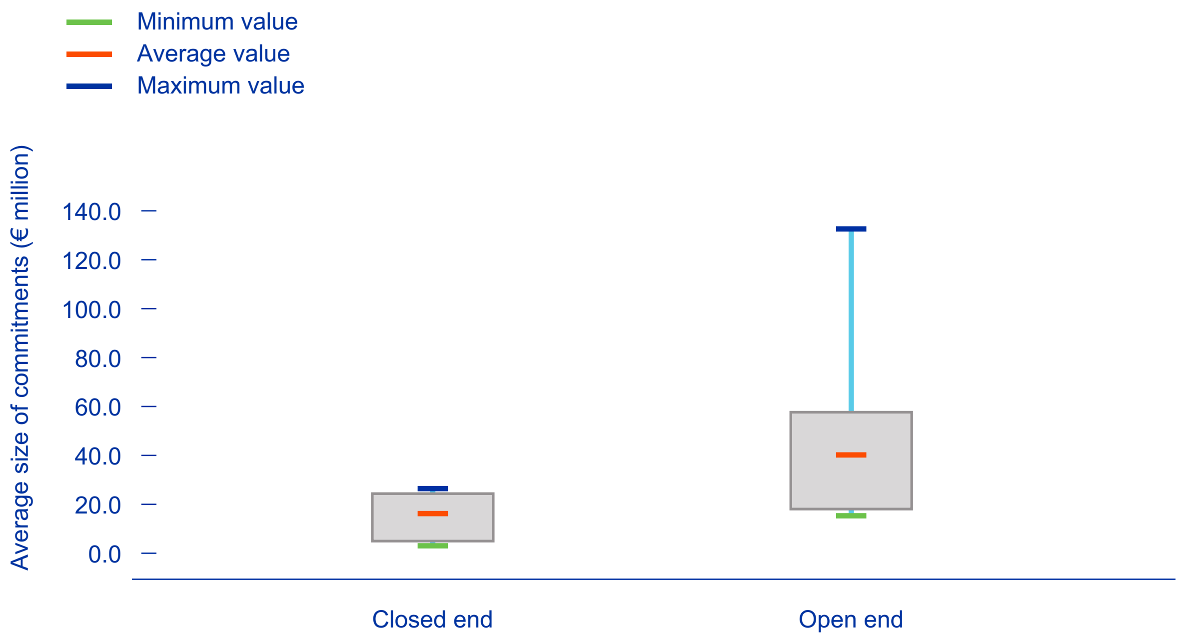

* The middle 'box' represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 22 vehicles.

## Average size of commitments by structure

Given the flexibility offered by open end funds of funds, they also have larger commitments on average and a much larger range than closed end funds of funds. The size of commitments for open end funds of funds range from €17.8 million (lower quartile) to € 57.4 million (upper quartile) with an average of €40.4 million. The average accounts for outliers that reach as high as €132.0 million. Closed end funds of funds have an average commitment requirement of €16.1 million, with a lower quartile value of €5.1 million and an upper quartile value of €24.4 million. The interquartile range for open end funds of funds is almost double that compared to closed end vehicles and an absolute range is fivefold.

**Figure 22 : Average size of commitments by structure**




* The middle 'box' represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 21 vehicles.

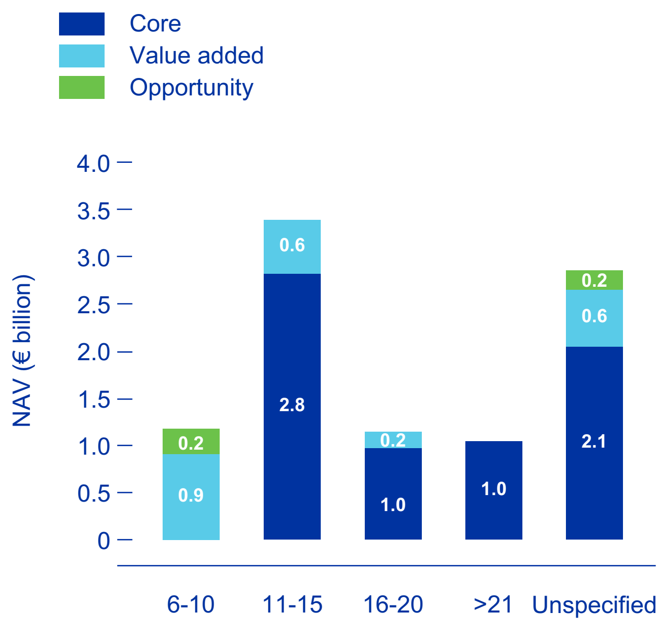
## Minimum target number of vehicles

Core funds of funds are generally more diversified and hence target a higher number of vehicles to invest in compared with non-core. Core makes up the largest proportion of funds of funds targeting 11-15 and 16-20 and >21 vehicles, representing 83.7%, 82.6% and 100% of NAV for each target number of vehicles category.

Conversely, non-core funds of funds are likely to pursue a more niche strategy and this is reflected in the number of vehicles they are targeting. Two-thirds (78.9%) of the NAV targeting 6-10 vehicles are that of value added. The remaining 21.1% of the NAV is opportunity.

> 'Core funds of funds are generally more diversified and hence target a higher number of vehicles'

Figure 23: Minimum target number of vehicles



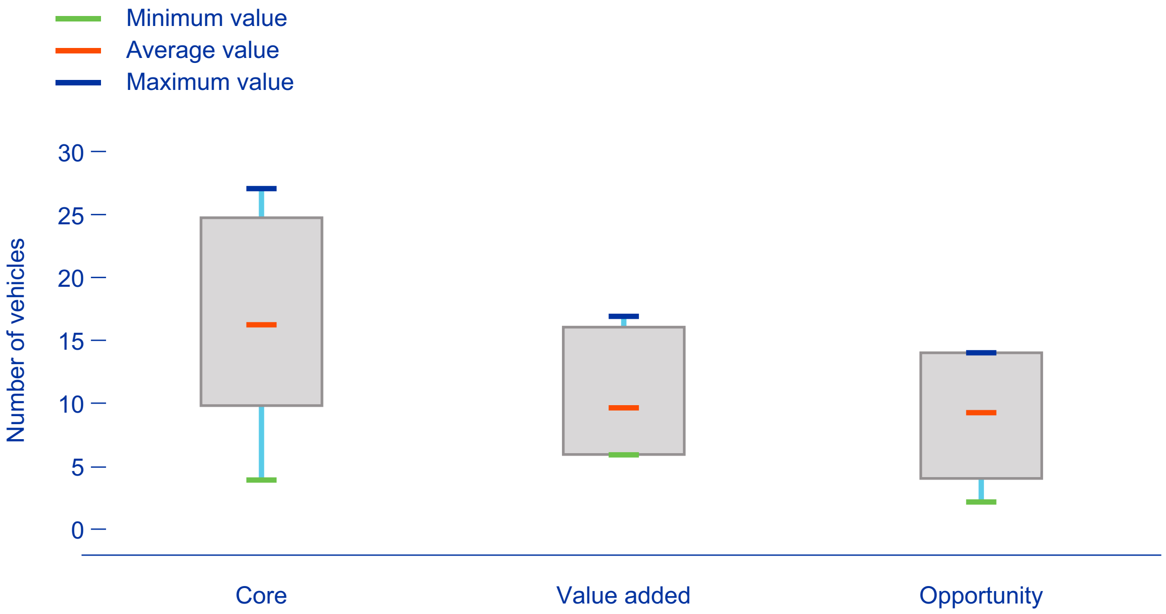
## Number of vehicles invested in

As of Q2 2016, funds of funds have invested into 12 different vehicles on average. However, this ranges differs considerably when numbers are scrutinised by vehicle style.

The average number of vehicles invested in for core funds of funds is much higher than for non-core vehicles. On average, core funds of funds have invested into 16 vehicles, compared with 8 for value added and 9 for opportunity.

The range between the lower and upper quartiles for core funds of funds is much wider than that for value added and opportunity funds too. For core funds of funds the interquartile range is between 10 and 25 vehicles with the minimum of 4 vehicles and the maximum of 27. For value added funds of funds the interquartile range is between 6 and 16 vehicles with the minimum of 6 and maximum of 17 vehicles. Meanwhile for opportunity fund of funds the interquartile ranges between 4 and 14 vehicles with the minimum of 2 and maximum of 14 vehicles.

**Figure 24: Number of vehicles invested in**




* The middle 'box' represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 32 vehicles.

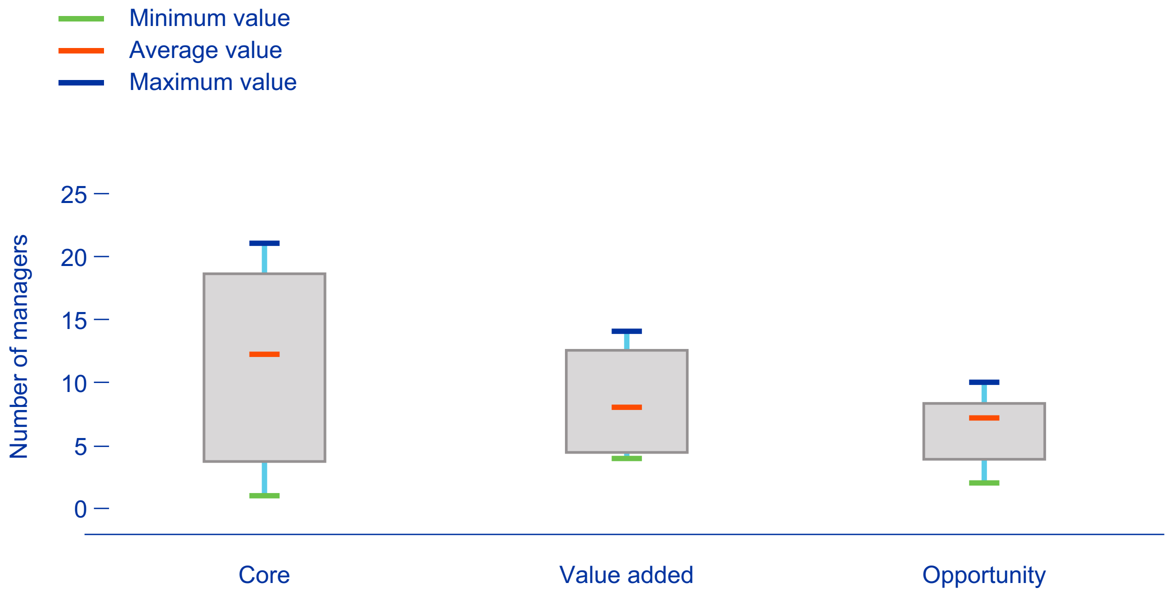
## Number of managers invested in

As is the case with the number of vehicles invested in, core funds of funds prefer to invest in more managers than any of the other two investment styles. On average core funds of funds invest in 12 managers with a minimum of 1 and a maximum of 21. Value added fund of funds on average select 8 manages with the minimum of 4 and the maximum of 14. Opportunity vehicles have a similar distribution: an average number of managers invested in is 7, while the minimum is 2 and the maximum is 10.

An inter quartile range also differs among fund of funds. For core, they difference between upper-quartile and the lower-quartile values is 15, it is 8 for value added vehicles and 4 for opportunity fund of funds.

> 'Core funds of funds prefer to invest in more managers than any of the other two investment styles'

**Figure 25: Number of managers invested in**




* The middle 'box' represents the middle % of scores for the group. The upper line represents the upper quartile group, while the lower line represents the lower quartile group. The upper whisker (dash) denotes the maximum value, while the lower whisker (dash) denotes the minimum value.

Note: The sample is comprised of 25 vehicles.

# Appendix

## Sample statistics

**Table 1: Sample statistics**

| Number of funds of funds | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
|---|---|---|---|---|---|---|---|---|---|
| **All funds** | **13** | **19** | **22** | **24** | **26** | **30** | **31** | **26** | **25** |
| **By style** | | | | | | | | | |
| Core | 7 | 9 | 10 | 11 | 12 | 14 | 14 | 11 | 9 |
| Non-core | 6 | 10 | 12 | 13 | 14 | 16 | 17 | 15 | 16 |
| **By target region** | | | | | | | | | |
| Asia Pacific | 3 | 4 | 6 | 7 | 7 | 8 | 8 | 5 | 4 |
| Europe | 8 | 13 | 13 | 14 | 14 | 14 | 14 | 11 | 10 |
| Global | 1 | 1 | 2 | 2 | 4 | 7 | 8 | 9 | 10 |
| North America | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **By structure** | | | | | | | | | |
| Closed end | 5 | 9 | 10 | 11 | 12 | 14 | 14 | 11 | 14 |
| Open end | 8 | 10 | 12 | 13 | 14 | 16 | 17 | 15 | 11 |
| **By size** | | | | | | | | | |
| Small (< €100 million NAV) | 4 | 4 | 7 | 9 | 9 | 12 | 13 | 8 | 10 |
| Medium (€100 - €300 million NAV) | 4 | 7 | 9 | 7 | 8 | 8 | 8 | 10 | 10 |
| Large (> €300 million NAV) | 5 | 8 | 6 | 8 | 9 | 10 | 10 | 8 | 5 |
| NAV (€ billion) | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 |
| **By style** | **3.6** | **4.3** | **4.0** | **4.7** | **5.5** | **5.8** | **6.3** | **5.4** | **6.5** |
| Core | 2.8 | 3.3 | 3.2 | 3.6 | 4.1 | 4.3 | 4.7 | 4.2 | 5.1 |
| Non-core | 0.7 | 1.0 | 0.9 | 1.1 | 1.4 | 1.4 | 1.6 | 1.2 | 1.3 |
| **By target region** | | | | | | | | | |
| Asia Pacific | 0.1 | 0.2 | 0.3 | 0.4 | 0.6 | 0.8 | 0.8 | 0.3 | 0.2 |
| Europe | 3.1 | 3.6 | 3.2 | 3.6 | 3.9 | 3.5 | 3.2 | 1.9 | 2.4 |
| Global | 0.2 | 0.2 | 0.4 | 0.5 | 0.7 | 1.2 | 2.0 | 2.8 | 3.6 |
| North America | 0.2 | 0.2 | 0.2 | 0.2 | 0.3 | 0.3 | 0.3 | 0.3 | 0.3 |
| **By structure** | | | | | | | | | |
| Closed end | 0.4 | 0.9 | 0.8 | 1.1 | 1.4 | 1.6 | 1.6 | 0.9 | 1.3 |
| Open end | 3.2 | 3.4 | 3.2 | 3.6 | 4.1 | 4.2 | 4.7 | 4.4 | 5.2 |
| **By size** | | | | | | | | | |
| Small (< €100 million NAV) | 0.1 | 0.5 | 0.6 | 0.7 | 0.7 | 0.5 | 0.7 | 0.6 | 0.3 |
| Medium (€100 - €300 million NAV) | 0.7 | 1.0 | 0.7 | 1.4 | 1.4 | 2.0 | 2.0 | 1.8 | 2.1 |
| Large (> €300 million NAV) | 2.8 | 2.8 | 2.8 | 3.0 | 3.5 | 3.2 | 3.6 | 3.0 | 4.1 |

CORPORATE RESEARCH INDUSTRY DATA PUBLIC AFFAIRS PROFESSIONAL STANDARDS

www.inrev.org