MARKETS STUDY

INVESTMENTS IN RENEWABLES
SURVEY OF INSTITUTIONAL INVESTORS 2015

KGAL
REAL INVESTMENTS

PREFACE

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HEAD OF STRATEGIC RESEARCH
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The fundamental importance of energy transition is becoming ever more evident. Only ambitious energy policy objectives and sustained global effort in implementing them will restrain multiple ill effects on the environment from fossil fuels. It is still a long and winding road to sustainable energy supply.

A consistent expansion of various types of renewable energy sources is essential to achieve these targets. It is true that a noticeable paradigm shift has already occurred in public consciousness, away from climate-damaging energy sources to more environmentally friendly ones, but developments until today are far from sufficient. Much greater efforts and investments will be needed.

Since 2003, the KGAL group, together with numerous institutional investors, has invested over two billion Euro in Renewables. It is important to resume these effort and continue to identify new investment opportunities in close collaboration with investors.

By participating in our survey, major institutional investors have helped to point out their current preferences and demands for capital allocation. On the basis of the results of the survey, KGAL will form future tailor-made and future-oriented investment opportunities.

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SURVEY METHODOLOGY

Address basis:
Institutional investors

Method of data collection:
Online (personalised – single-link)

Survey tool:
Standardised questionnaire with partly-open questions

Survey period:
22 June to 5 August 2015

Responsible surveying institution:
GESS Phone & Field Marktforschung GmbH

COMMENTATORS

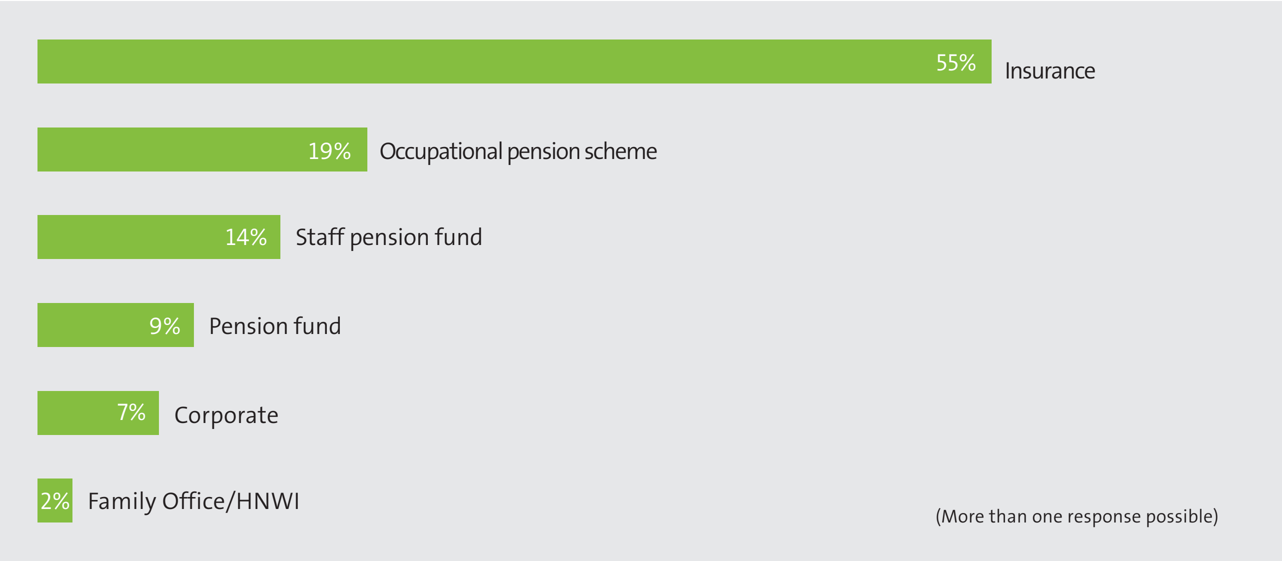
FLORIAN MARTIN
MEMBER OF THE MANAGING BOARD
KGAL CAPITAL GMBH & CO. KG

MICHAEL EBNER
SPOKESPERSON OF THE MANAGEMENT BOARD
KGAL INVESTMENT MANAGEMENT GMBH & CO. KG

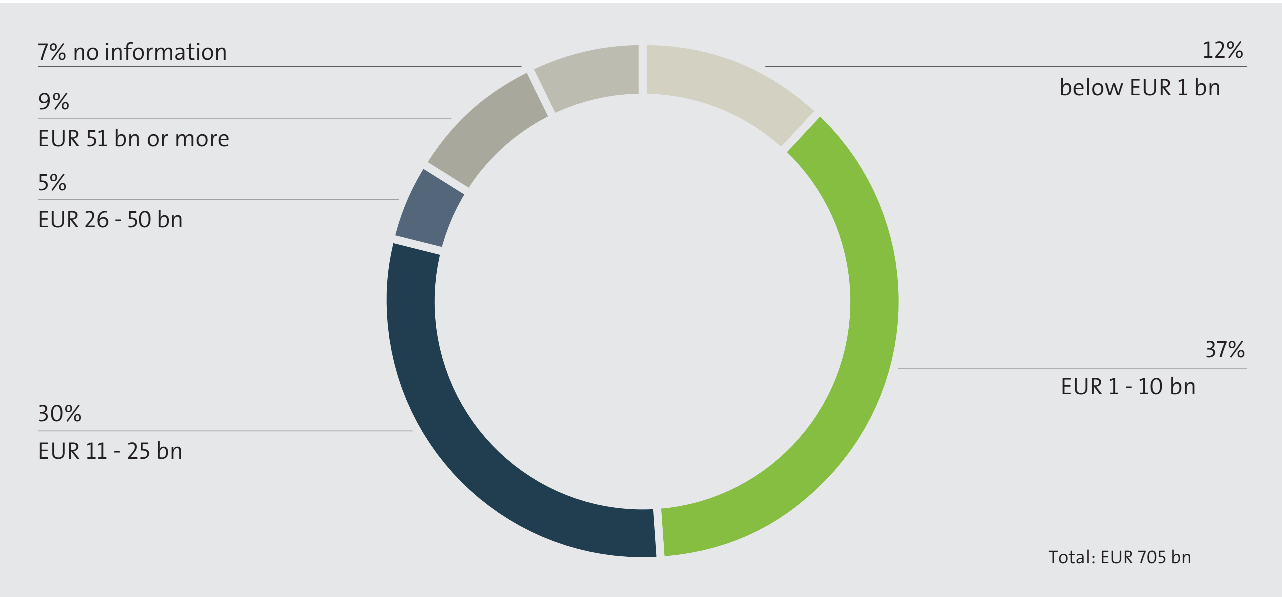
CHARACTERISTICS OF SURVEYED INVESTORS

Highest response rate from

- insurance companies (55%)
- followed by Occupational pension scheme (19%)
- and staff pension funds (14%).



ASSETS UNDER MANAGEMENT



The assets under management of the institutions participating in the survey amount to about EUR 700 billion.

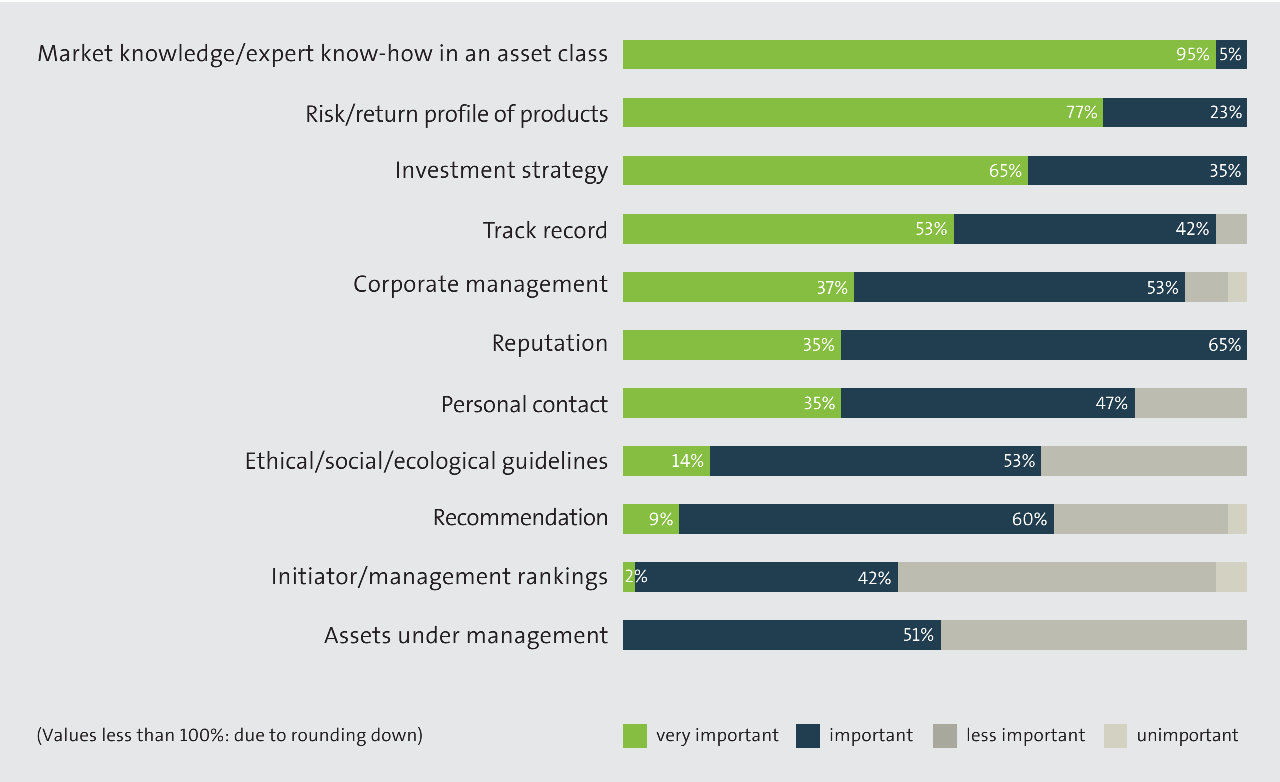
DECISION FACTORS IN CHOICE OF ASSET MANAGER

In selecting an Asset Manager, the following decision factors are relevant for investors:

- Market knowledge and expert know-how in the asset class (95%)

Criteria such as

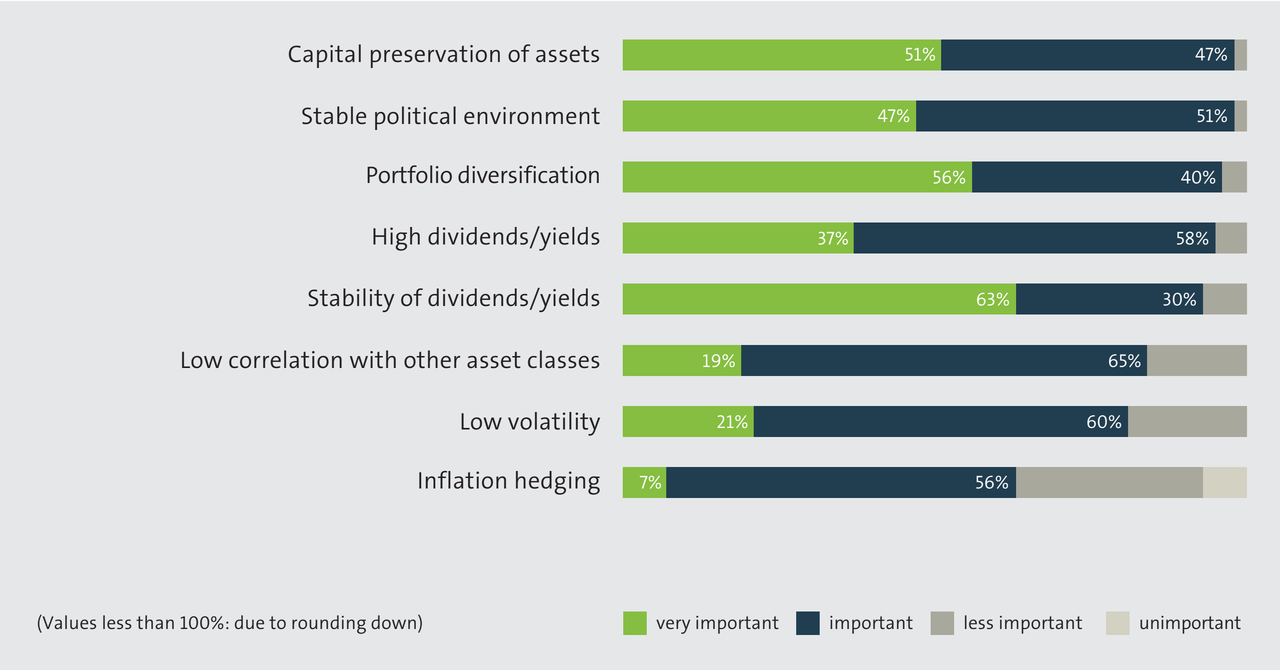
- risk / return profile of products (77%),
- investment strategy (65%) and
- track record (53%) appear to be of slightly less importance to investors.



COMMENTS from FLORIAN MARTIN:
Overall, not a surprising picture, as ultimately the competence of the manager and the structure and details of their investment funds are the decisive factors. It is interesting that professional investors rely on an internal analysis for decision making around the selection of the manager and seemingly attach less importance to external ratings.

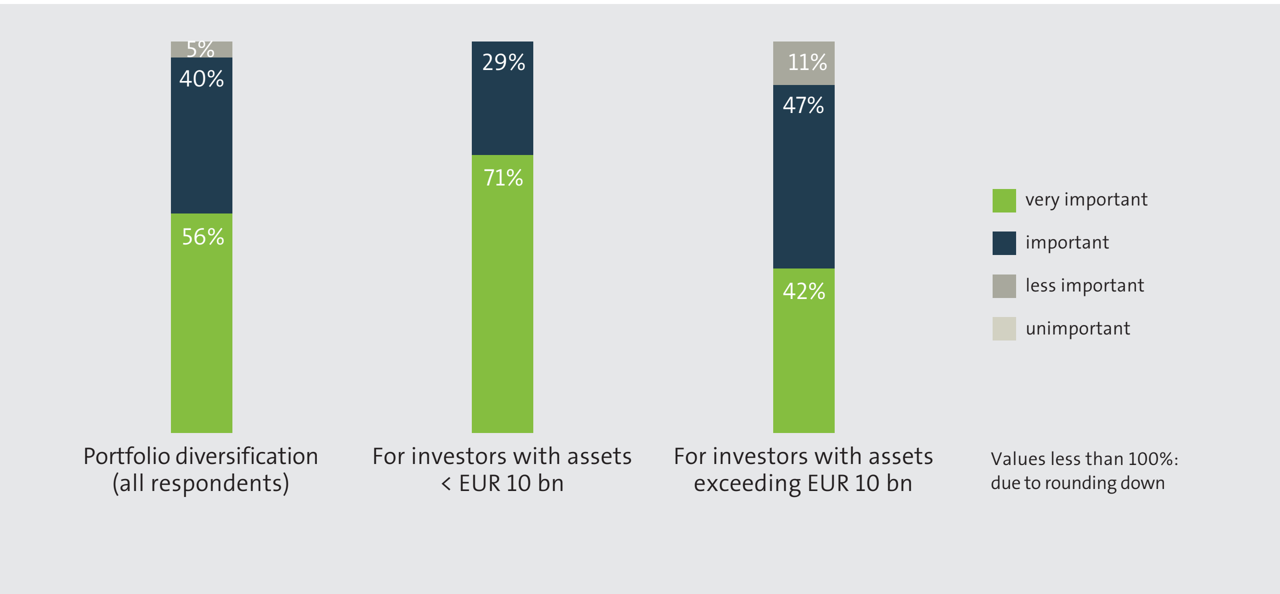
IMPORTANCE OF STRATEGIC INVESTMENT CRITERIA

"Safety first" – Safety and stability are still more important than yield maximisation:
Investors consider the capital or value preservation for an investment, the stability of distributions in a stable political environment and a targeted risk minimisation through portfolio management as the most important aspects of the investment strategy.



PORTFOLIO DIVERSIFICATION

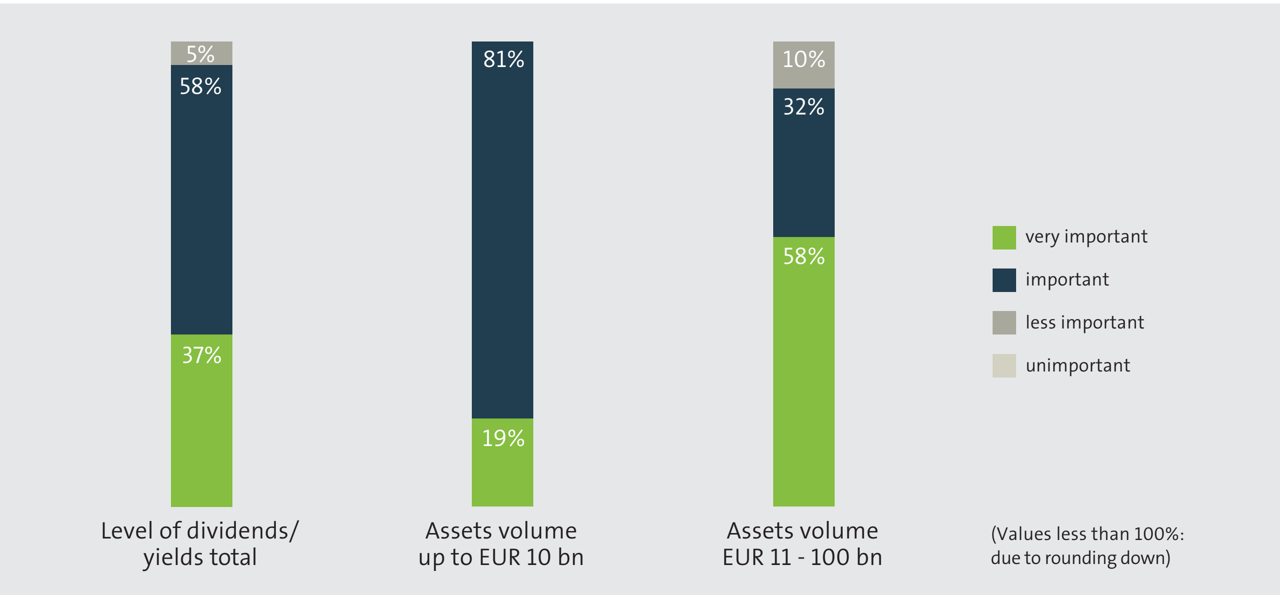
56 % of the respondents consider portfolio diversification as an important factor. For those investors with assets of up to EUR 10 billion it appears to be an even more important aspect than for those with assets exceeding EUR 10 billion.



STABILITY OF DIVIDEND PAYOUTS/YIELDS

Stability is one of the major considerations for larger institutional investors in particular. The level of distributions and returns is only subordinated to this.

LEVEL OF DIVIDENDS/YIELDS

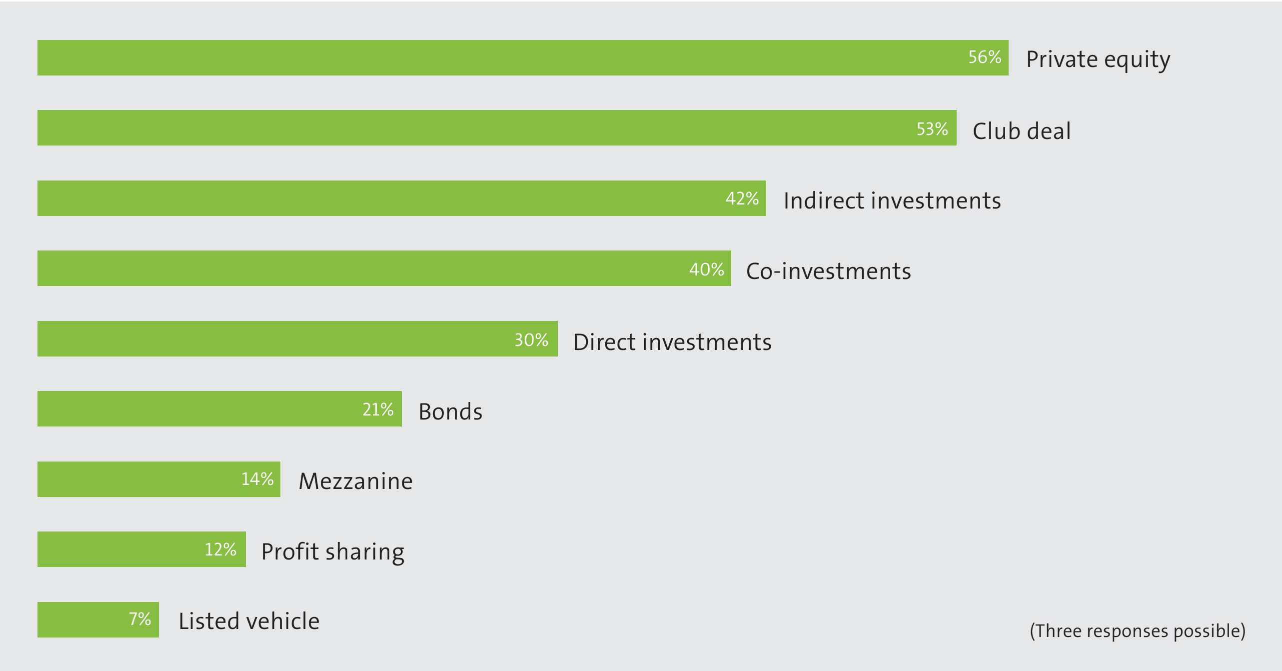


COMMENT from FLORIAN MARTIN:
The importance attributed to distribution payout stability clearly indicates that Renewable Energies have developed to play an important and permanent role in the asset liabilitiy management (ALM) of the investors' core portfolio.

COMMENT from MICHAEL EBNER:
Capital-rich investors with extensive experience are able to make a realistic assessment of both the absolute level of dividends and their composition for different asset types.

MAIN INVESTMENT STRUCTURES FOR RENEWABLES

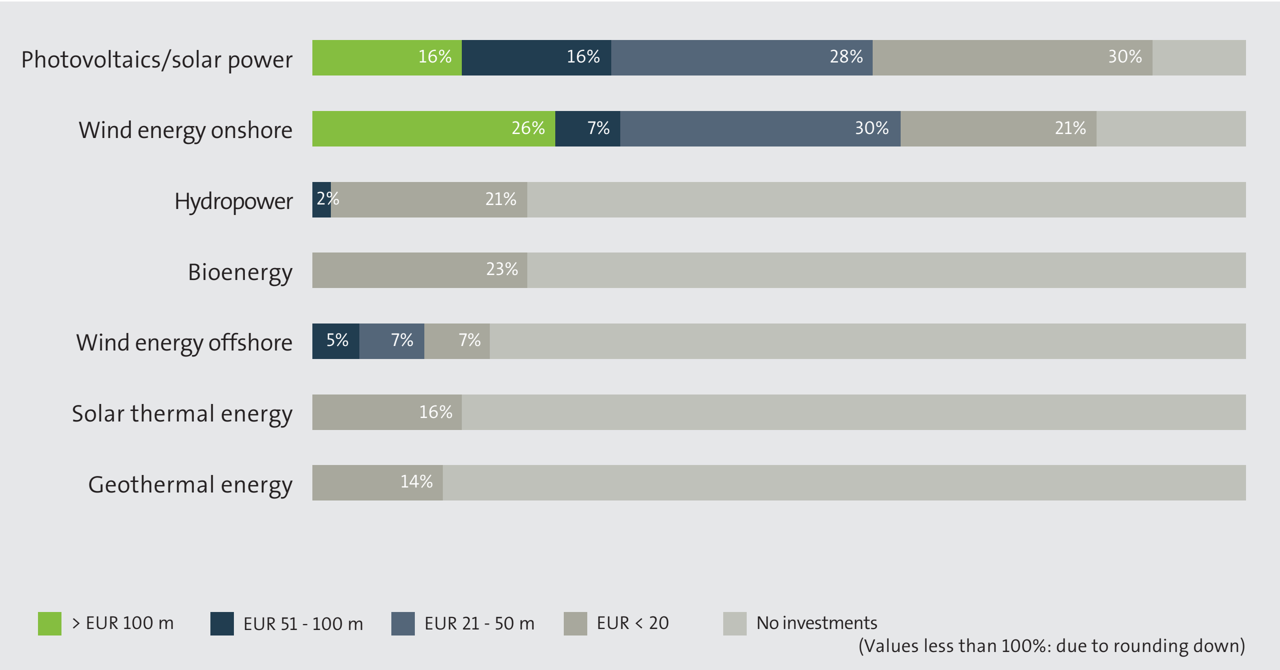
The most important investment structures for investors in the area of Renewables are, with nearly equal shares, private equity (56%) and club deals (53%).
These are followed by indirect investments and co-investments, which rank clearly above direct investments.



CURRENT INVESTMENT VOLUMES IN RENEWABLES

Traditional products, such as wind energy (onshore) and photovoltaics, represent the majority of investments made so far.

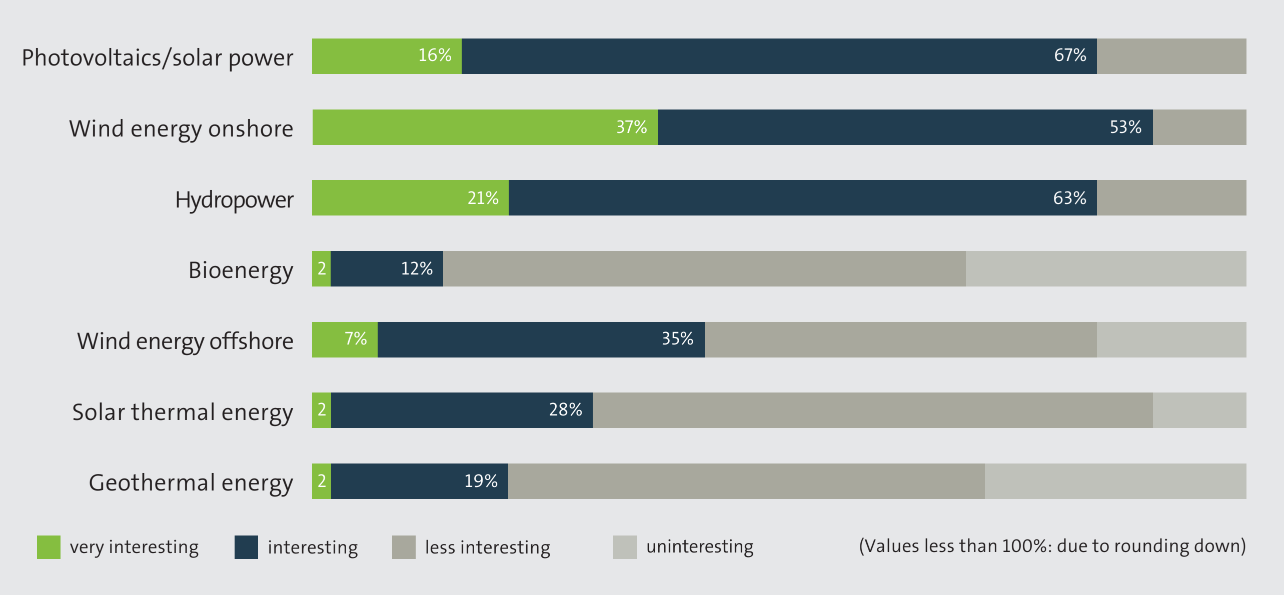
Investment activities in the areas of hydropower, bio energy, wind energy offshore, solar and geothermal energy are at a low level.



PREFERENCES FOR FUTURE INVESTMENTS

For future investments, hydropower investments are of increasing interest to investors and squeezes into second place between wind energy onshore and photovoltaics.

- 84% of investors consider hydropower as as very interesting or interesting.
- Wind energy onshore leads the table with 90%, with photovoltaics only slightly behind in third place at 83%.
- Wind energy offshore (42%) attracts increasing interest.



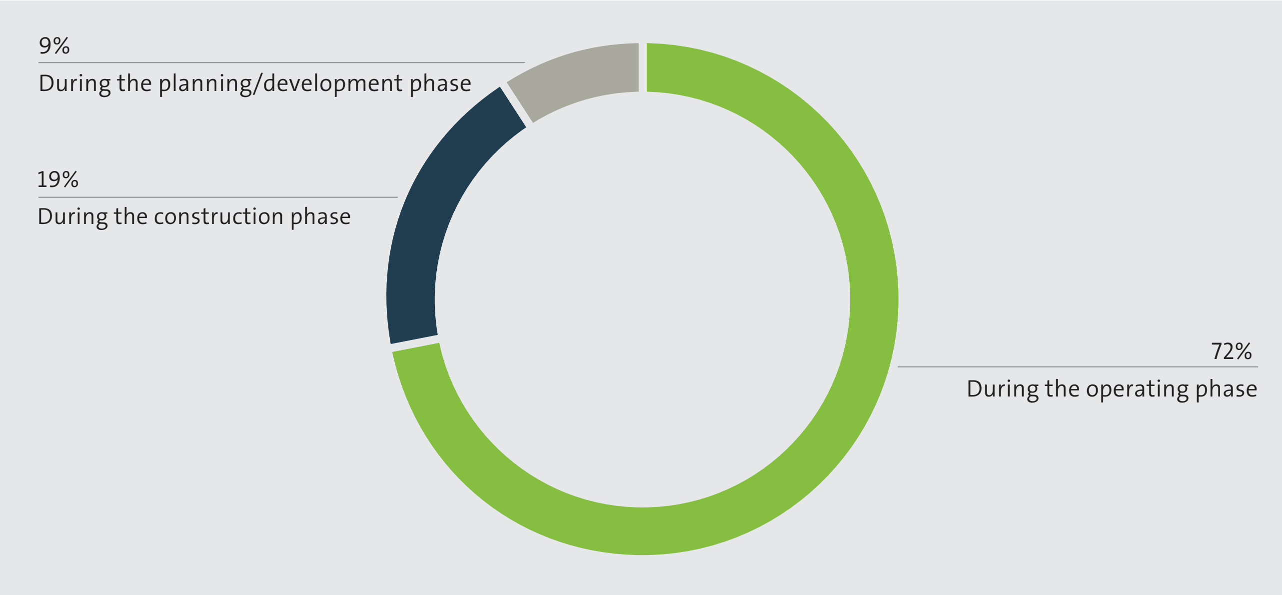
COMMENT from FLORIAN MARTIN:
Low earnings volatility is generally one of the main objectives for institutional investors. This is equally true in the field of Renewables, where up to now the "stable" photovoltaics have attracted the highest investment volume. Due to the falling yields and decreasing supply in that area, onshore wind has caught up in recent years – with acceptiong higher volatility. Hence, the interest in hydropower – generally associated with low earnings fluctuations – is correspondingly high, diversifying the portfolio even further.

COMMENT from MICHAEL EBNER:
Photovoltaics seems to be currently experiencing a certain reluctance on the part of investors. This may be due to so-called yield compression or to a certain amount of saturation in this asset category. For this reason, assets with lower market penetration such as hydropower have been able to muster greater interest. Investments in hydropower promise greater stability in return for lower yield expectations. On the other hand, wind offshore is beckoning with the prospect of supposedly higher earnings levels. In both these last two cases, we observe a general lack on experience among investors.

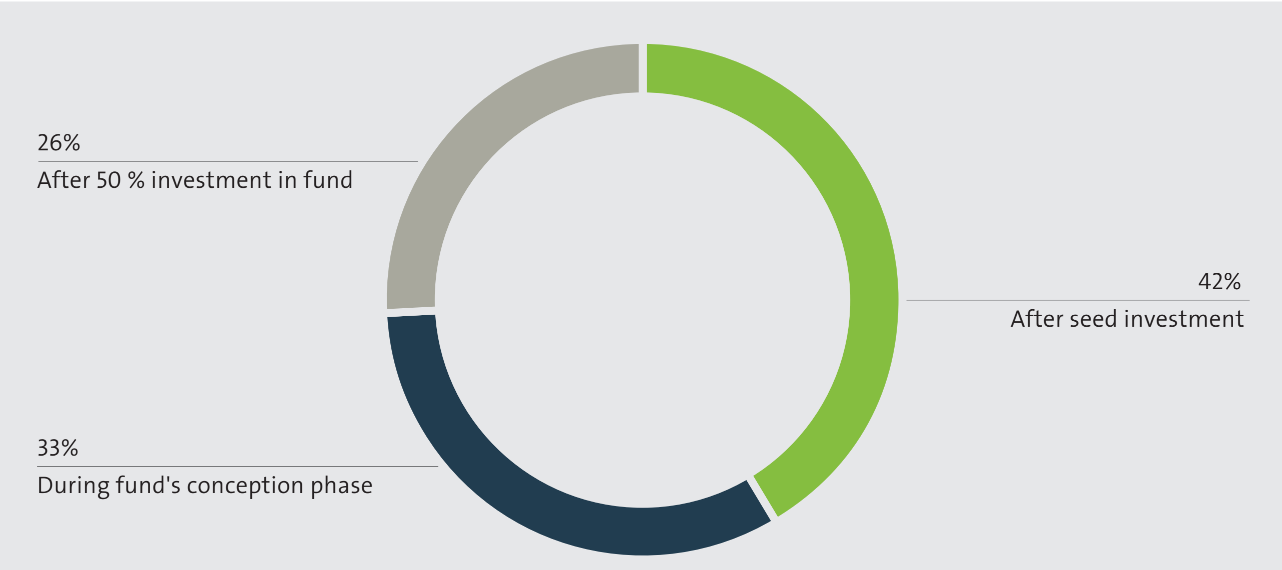
PROJECT PHASE

Assets already in operation (time-established) have overriding significance for investors:

- 72% of the respondents prefer an investment in the operating phase.
- In total, more than two thirds (68%) of respondents would only want to participate in the investment vehicle once investments have been made.
  Of these, 42% would invest after a seed investment has been made and 26 % once 50% of the investment volume has been invested.
- Even so, 33% would get involved even during the concept phase of the investment (blind pool).



INVESTMENT VEHICLE



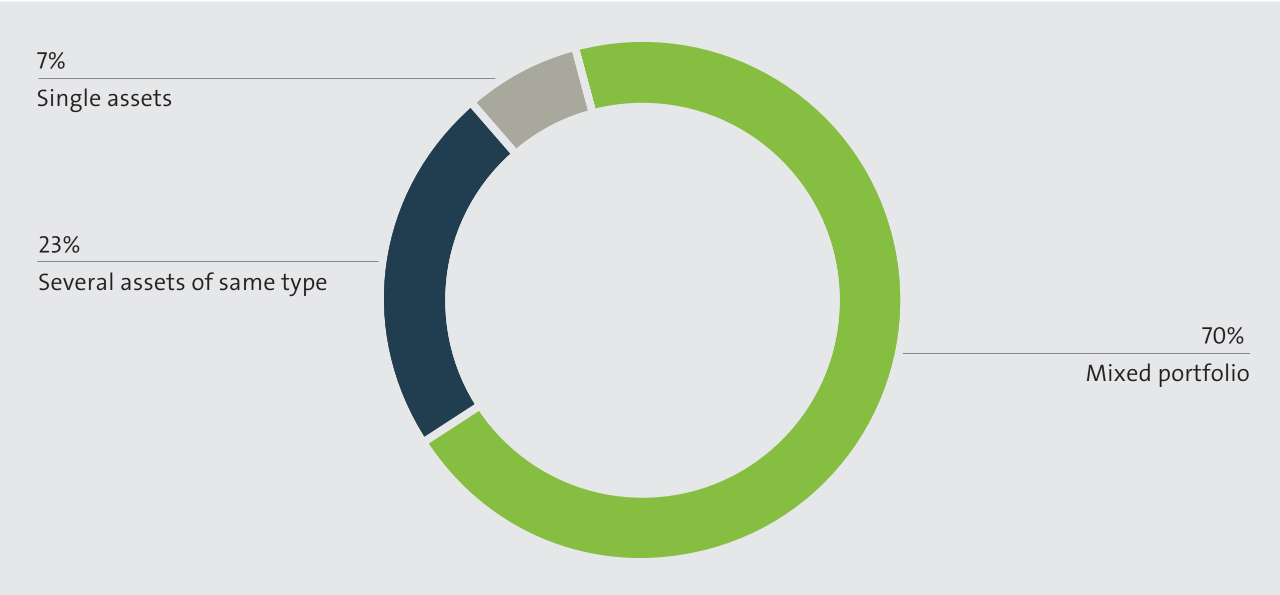
COMMENT from MICHAEL EBNER:
The survey shows that investors' readiness to invest in a vehicle increases once the first investments have been entered into. However, investing in existing portfolios may also have disadvantages, e.g. higher costs and lower yields. In the case of blind pools, the experience of the Asset Manager is even more important – establishing a successful blind pool fund requires specific expert knowledge.

INVESTMENT TYPES

For many years the dominating investment strategy has been that of the single investment type – e.g. wind power investment or solar energy investment – but a change is apparently under way.

- Many institutional investors have come to prefer investment models with mixed portfolios (70%).
- Asset concepts with several assets of the same type are preferred by 23%.
- Single assets count only for 7%.

Clearly, diversification is gathering considerable strength.

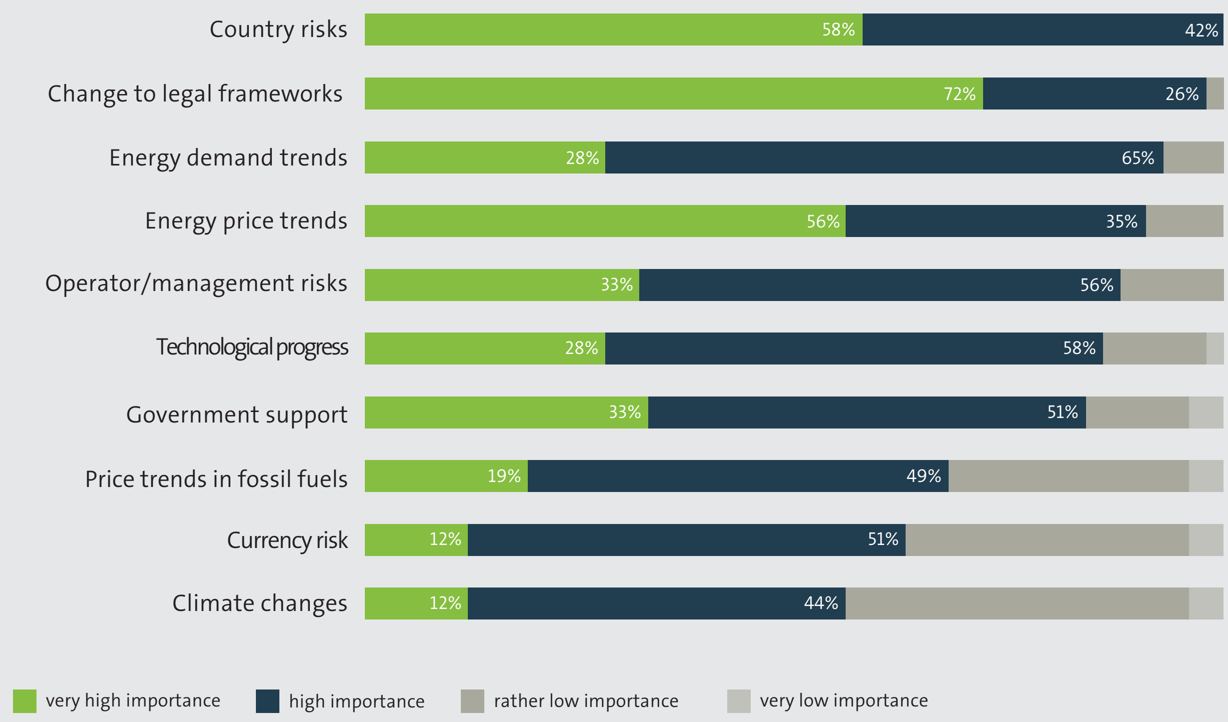


COMMENT from MICHAEL EBNER:
Our experience also shows that the spread across countries and across types of energy generation has a significant role in the stability of earnings. The portfolio effect balances the volatility of individual assets.

FACTORS AFFECTING INVESTMENTS IN RENEWABLES

Investment trends are influenced by a number of factors:
- as a factor with a high or very high significance, country risk was at the top of the list (100%),
- followed by changes in legal frameworks (98%, of which 72% stated very high significance) and
- energy demand or electricity price trends (93% and 91% respectively.

The aspect of state support reached only 5th place in investment decisions (criterion: very high significance) and even dropped to 7th place when taking very high and high significance together.



(Values less than 100%: due to rounding down)

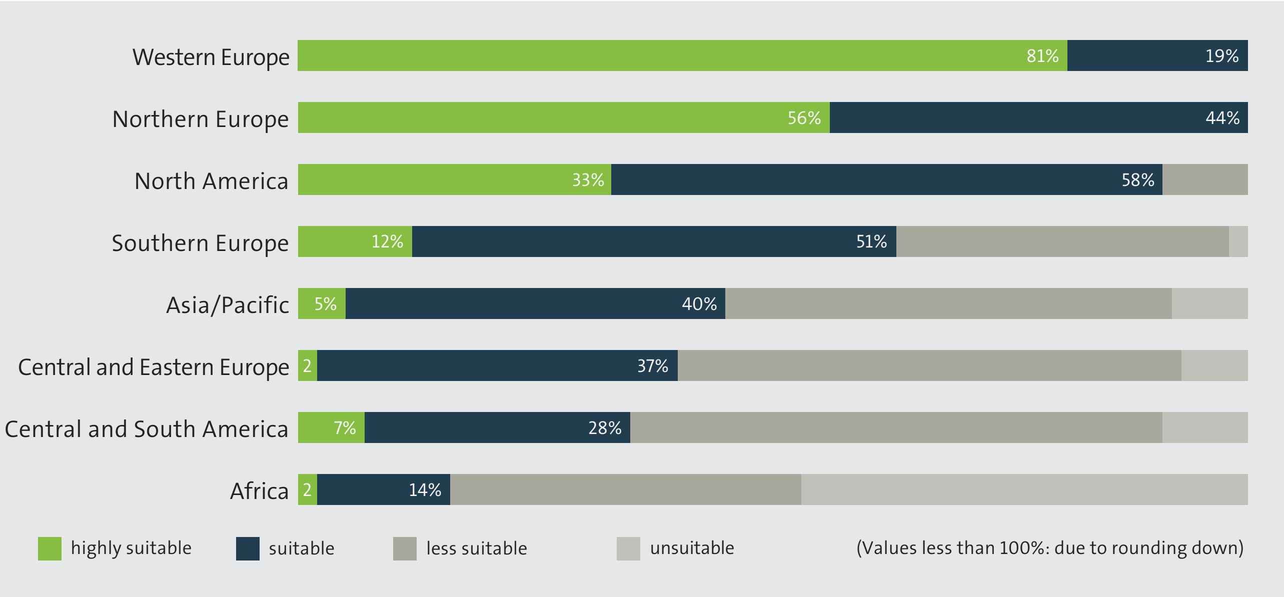
COMMENT from MICHAEL EBNER:
The case of retrospectively changed government support has become a new risk factor in the last few years. We can see a learning process on the side of investors, who – like the initiators – in the past have underestimated the regulatory risk. It is obvious that no clear danger was seen on this point, due to lack of negative experience. In the light of a more rapidly changing environment and a sometimes arbitrary adjustment of political parameters, investments which are not based on government support will assume ever greater importance.

REGIONS/COUNTRIES FOR INVESTMENTS IN RENEWABLES

On the question of regions/countries suitable for investments,

- Western Europe,
- Northern Europe and
- North America had the top positions.

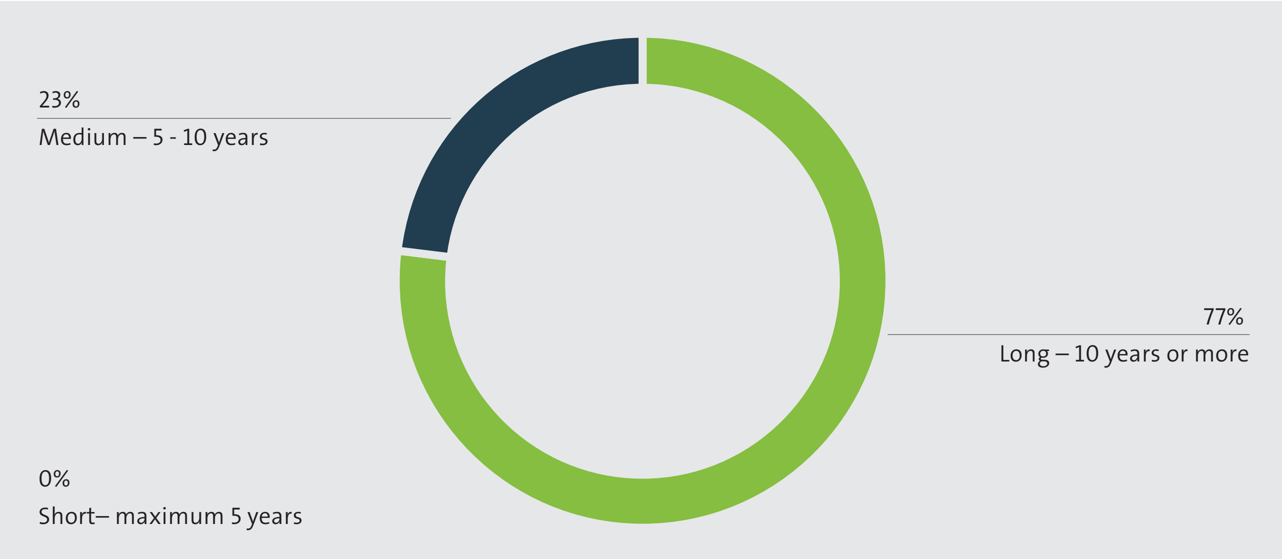
The sunny regions of Southern Europe, Africa and Asia/Pacific only figure in fourth position. Crucial here are not least differences in important underlying conditions such as infrastructure, country risk and political level.



COMMENT from MICHAEL EBNER:
Naturally, developed countries still dominate investors' wish lists. However, if you regard the world map from the point of view of where the best conditions for renewable power generation lie, the picture for, say, photovoltaics, is completely the opposite. Our task as Asset Managers will then be to identify the countries with security of investment and market efficiency. Thus we will be able to detach from diminishing state support programmes and make sustained investments in new markets.

PREFERRED INVESTMENT PERIOD

77% of participants prefer periods of 10 years or longer for their holdings.
Medium periods of 5-10 years are acceptable to 23%, while none of the responders went for shorter periods.

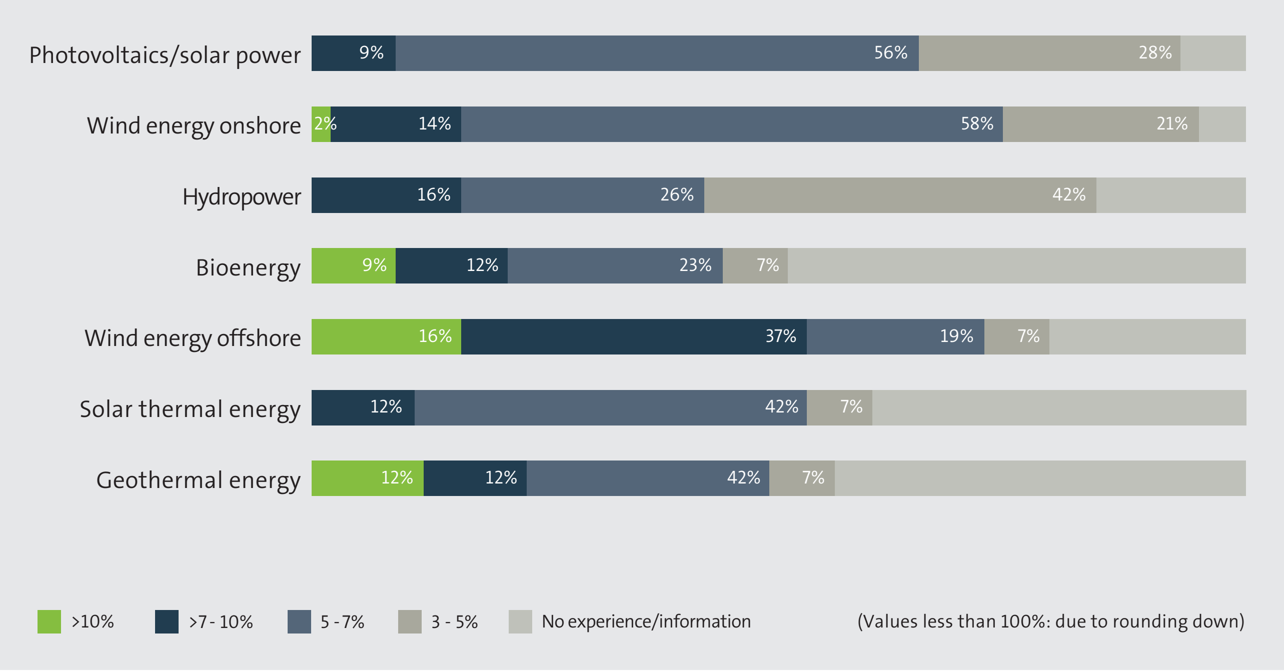


COMMENT from FLORIAN MARTIN:
As Asset Managers, we see, especially in Germany, a preference for long investment periods – though this is also increasingly the case in the other European countries. Within the confines of their Asset Liability Management, investors seek investments with matching maturities. As the classic long-term bond, e.g. 10 year German Federal Bonds, are only rarely offered with an attractive yield profile, the search is on for long-term assets in the area of alternative investments. This trend is supported by rising regulatory demands for matching maturities for assets and liabilities.

TARGET YIELDS – EVALUATED AS MARKET-COMPLIANT AND SATISFACTORY

With respect to an assessment of market-compliant and satisfactory target yields in investments in Renewables, no clear picture emerges:

- For photovoltaics and wind energy onshore, 56% and 58% respectively consider yields of 5-7% to be market-compliant or satisfactory.
- 42% also expect these yields for solar thermal energy.
- In the case of hydropower, 42% of responders consider 3-5% to be market-compliant.
- With wind energy offshore, 7-10% is judged to be market-compliant.
- Barely half of participants have no prior experience of solar or geothermal energy or have no comments to make.

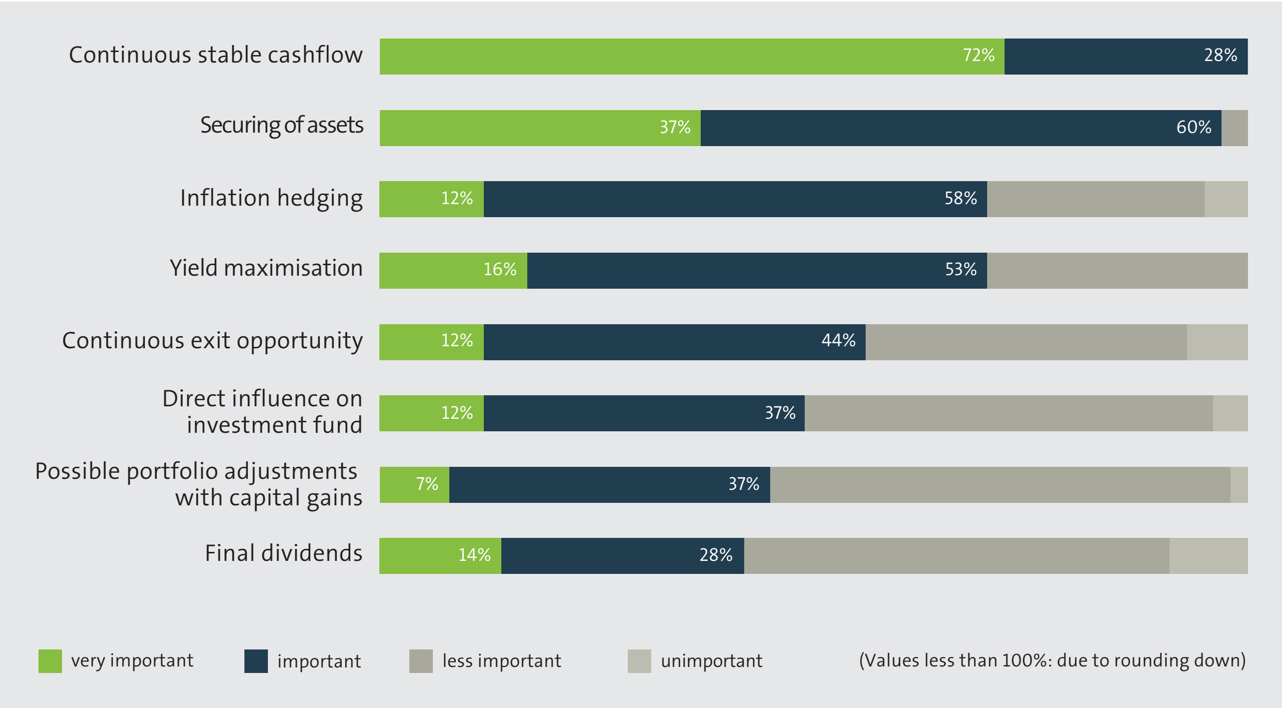


COMMENT from MICHAEL EBNER:
The absolute figures for market-compliant and satisfactory target yields definitely need more research, as in particular the yields on the basis of gross and net yields (before and after costs) and also considering the debt ratio need to be distinguished. Nevertheless, in our view, photovoltaics should be showing a gap from wind onshore, but this is not reflected in the survey.

IMPORTANT FACTORS FOR INVESTMENTS IN RENEWABLES

The main interest of investments in Renewables relates to

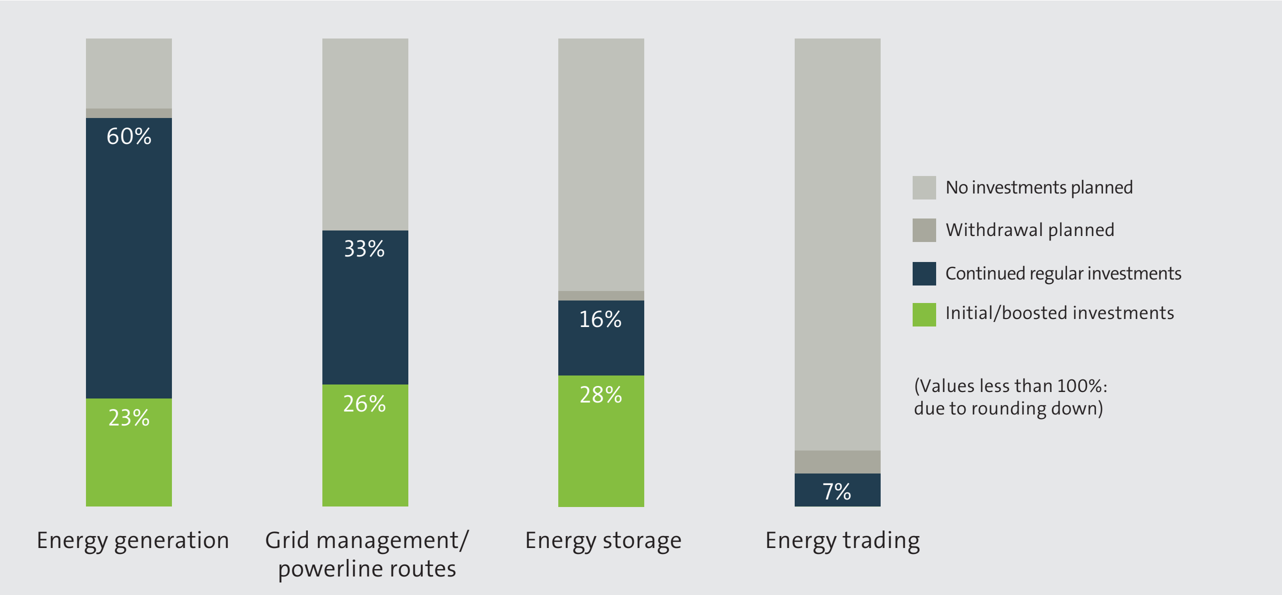
- the continuously stable cashflow (72%) and
- securing of assets (37%).
- Inflation hedging and yield maximisation rank behind these.
- Factors such as direct influence on the assets pool (only very significant for 12%),
- continuous exit opportunity (12%) and
- possible portfolio adjustments with capital gains (7%) take a back seat.



VALUE CREATION CHAIN – FUTURE INVESTMENT FOCUS

In the future too, institutional investors see their investment focus primarily in

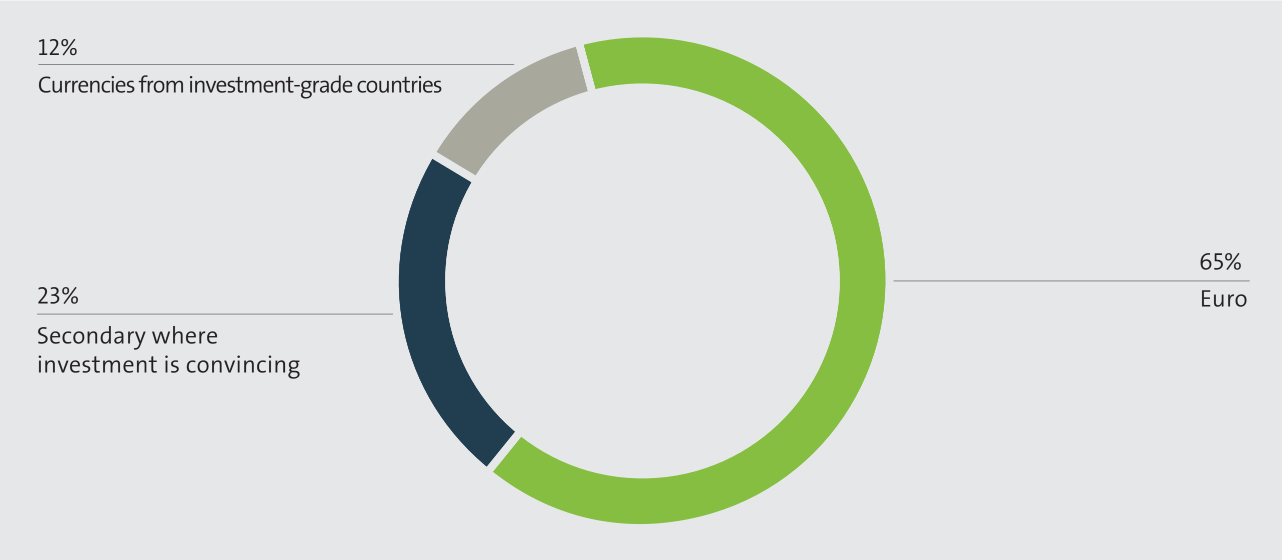
- energy generation (83%).
- Grid management and powerline routes are of interest to 59%,
- while 44% are interested in investments in energy storage.
- The topic of energy trading is generally ignored.



COMMENT from MICHAEL EBNER:
The preferences for investment focus reflect the offers currently available on the market. While energy generation has developed into an established asset class, other segments such as energy transmission and storage are only starting out. Energy transmission is attracting little interest due to lack of supply. In addition, the area of energy storage has currently colonised the Private Equity/Venture Capital Investments environment.

CURRENCY PREFERENCES FOR INVESTMENTS

- 65% of participating investors prefer Euro investments.
- Even so, 23% would also accept other currencies, if the investment offer was convincing enough.
- For 12%, investments in the currencies of investment grade countries would be acceptable.



COMMENT from FLORIAN MARTIN:
According to the Solvency II calculations (overall calculation for German life assurance), adding certain currencies to the market risk model – despite the surcharge for foreign currency – gives a lower total burden on the Solvency Capital Requirement. If the investment is right, foreign currency could thus be evaluated as a further plus point.

COMMENT from MICHAEL EBNER:
The case of currency preferences reveals the focus on own Asset Liability Management. If an exchange rate risk threatens one asset, "additional yields" must be generated to compensate for the risk of any exchange rate losses. Basically, we are seeing rising affinity on the part of institutional investors for foreign currencies, provided the other framework conditions make the investment appear attractive.

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