



# Transaction Costs Transparency

Prepared for the FCA by Novarca

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## 1. Objectives & Remit

Novarca was commissioned by the FCA to examine transaction cost transparency within Group Personal Pension (GPP) products.

The goal of the study was to:

- A. Identify the various transaction-related costs that exist within GPP products
- B. Determine which costs are relevant to assessing value for money
- C. Recommend a practical method for measuring these costs
- D. Propose standards for disclosing cost information so that IGCs can make value-for-money assessments

Novarca focused on the following questions:

### A. Identifying costs

- where do transaction costs occur within GPP products
- what other investment-related costs might impact returns

### B. Relevant costs

- can the cost be measured accurately
- is the cost material
- can the cost be controlled or reduced

### C. Measuring costs

- what data sources exist
- how accurate is the data
- are there technical challenges to capturing and analysing the data

### D. Disclosing cost information

- how can costs be reported at the scheme or portfolio level
- what comparative data is appropriate

## 2. Executive summary

- The most significant transaction costs can be made transparent quickly, using good estimates or proxies for some costs
- There are technical challenges to collecting data at the scheme level, but data is available at the portfolio level
- GPP providers have asked for common standards for measuring and reporting costs. This would encourage market participants to provide information and make industry benchmarking possible
- The absolute level of costs does not tell the whole story about value for money. The degree of portfolio turnover and the underlying investment strategy should be taken into account
- The Netherlands provides an example of the benefits of introducing simplified transaction cost reporting

Calculating transaction costs is not an exact science. Not all costs are directly observable; there is a qualitative component to many costs and competing methodologies for calculating them.

Despite these complications, the bulk of the costs that are most likely to occur within the investment portfolios of GPP products can either be measured directly or estimated with enough accuracy to give Independent Governance Committees (IGCs) a good view of the impact of transaction costs on the portfolios underlying their schemes.

Partial transaction cost transparency could therefore be introduced quickly. The pensions industry in the Netherlands has followed this approach successfully,

implementing a simplified transaction cost reporting requirement. This is discussed in section 8.

The GPP industry is not currently prepared for industrial-scale reporting of transaction costs. Neither the GPP providers nor their underlying portfolio managers systematically calculate or collate transaction cost data. However all the providers we spoke to were willing to address this problem. Most preferred that common standards for calculating costs be applied across the industry. This would speed up data gathering by individual providers and make cross-industry comparisons possible, as all providers would be using the same methodologies.

The absolute level of transaction costs does not necessarily reflect value for money. A passively managed bond fund will incur lower transaction costs than an actively managed equity fund. IGCs need additional information to assess whether their transaction costs represent value for money, and the ability to compare across schemes. Benchmarks can be constructed that take the underlying investment exposure into account.

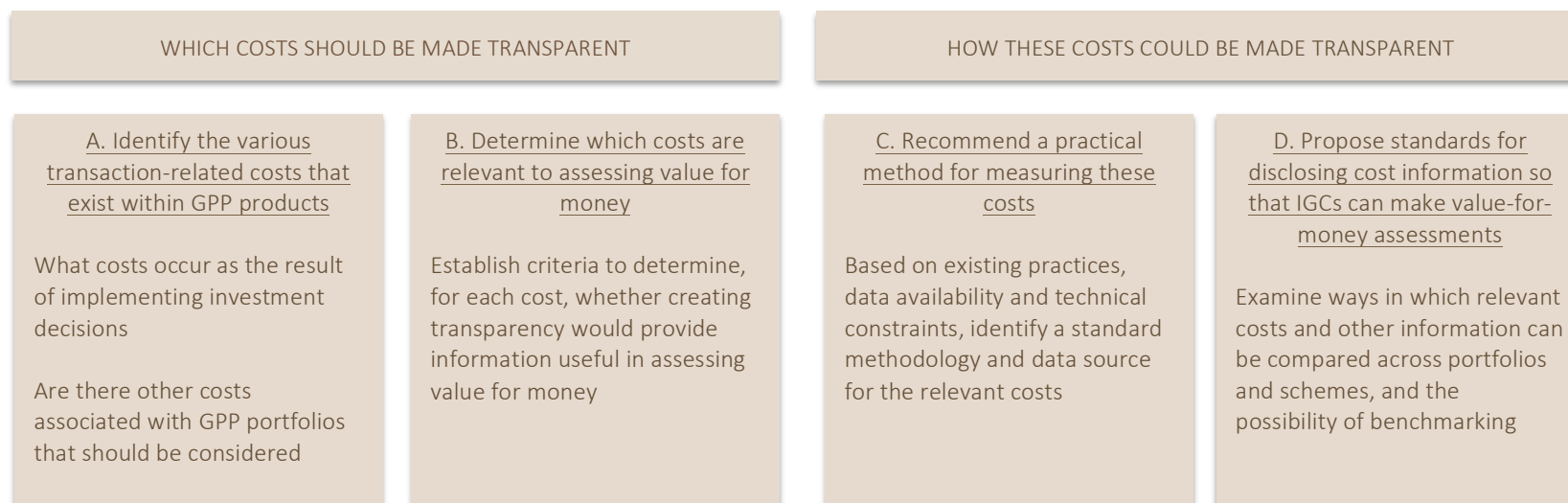
The detailed list of transaction costs and other uncapped investment costs that may be incurred by a GPP scheme, depending on its underlying investment portfolios, is over 40 items long (please see table 1 in section 4). However just eight cost categories provide enough information to give IGCs an informed view of transaction costs, as shown in table 2. It should be straightforward to obtain the data for these cost categories.

Section 9 presents reporting templates that could form the basis for a rapid and simple implementation of transaction cost transparency at the IGC level.

### 3. Methodology and approach

Novarca approached the issue of transaction cost transparency by looking firstly at *which* costs should be made transparent and secondly at *how* these costs could be made transparent.

Information for both aspects of the project came from Novarca’s own databases of actual investment cost data and practices; our knowledge of calculation methodologies and reporting systems; interviews with GPP providers and their suppliers; academic studies; commercial data sources and interviews with key players in the regulatory process in the Netherlands.



#### 4. Identifying transaction-related costs that exist within GPP products

- Most of the costs considered occur at the level of the investment portfolio
- These include transaction costs plus other investment-related costs
- Transaction costs are either explicit (direct) or implicit (indirect)
- In addition, switching costs at the level of the pension fund vehicle were examined

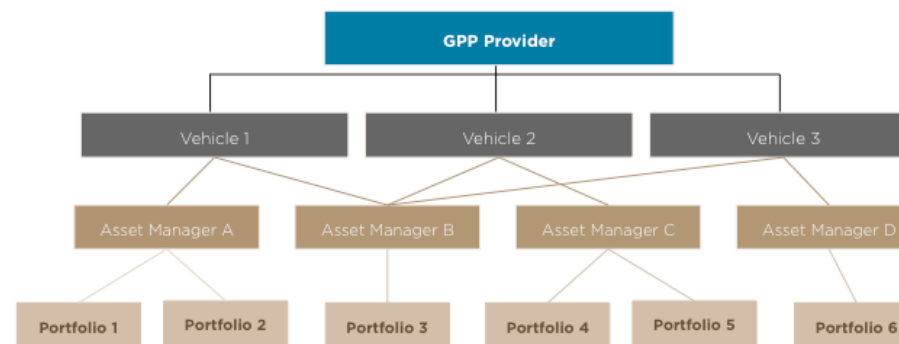
Chart 1 shows a simplified investment structure to illustrate where transaction costs and other investment-related costs may occur. The GPP provider operates a number of pension funds, using different vehicles that each use one or more asset managers to run the underlying investment portfolios. The portfolios might be pooled funds or bespoke mandates. Financial accounting takes place at the GPP provider level; fund accounting takes place at the portfolio level.

Transaction-related costs can occur

1. within portfolios (referred to in this document as “transaction costs”), when underlying securities are bought and sold
2. across portfolios (referred to in this document as “switching costs”), when the vehicle buys or sells some or all of its position in a portfolio, for example as the result of a change in asset allocation or because it wants to appoint a new manager

Other investment-related costs occur within portfolios and include the costs of custodian services (such as stock lending) and look-through costs of non-transparent securities. Although not strictly speaking transaction costs, these costs fell within the scope of this project because they are not currently transparent and might be important in an assessment of value for money.

**Chart 1 – Simplified investment structure**



Source: Novarca

These costs are discussed in more detail below.

## VEHICLE-LEVEL COSTS - SWITCHING COSTS

Switching costs are the costs incurred by a vehicle when it reduces its holding in one portfolio and increases its holding in another, for instance if the GPP provider decides that it wants a new manager for a specific asset class or if it changes its top-down asset allocation.

In selling one underlying fund and buying another, the vehicle would incur a spread cost on each leg of the trade; some managers may also impose entry or exit fees.

These purchases and sales would also generate transactions within the funds being traded and so create transaction costs at the portfolio level. We assume that existing measures designed to protect investors, such as dilution levies or swing pricing, cover the risk of double-counting transaction costs created by switching decisions. The same is true of transactions generated by subscriptions or redemptions at the level of the pension fund.

GPP providers with in-house asset managers can keep their switching costs low by paying a fixed annual fee to the asset manager that includes asset allocation changes. Crossing can also reduce switching costs: if an asset manager has a big enough platform and fund range, it can match buyers and sellers so that each side trades at the mid price. GPP providers whose internal asset managers have good crossing platforms can enjoy very low switching costs, potentially incurring no spread at all when they switch between underlying funds.

## PORTFOLIO-LEVEL COSTS – HOLDING, MANAGING AND TRANSACTION COSTS

Portfolio costs can be categorised a number of ways, for example into fixed and variable costs, or asset-based costs and monetary charges. We categorise them as

- **Holding** costs: the costs of safeguarding the assets and of meeting regulatory requirements
- **Managing** costs: the costs of taking investment decisions and of running the business
- **Transaction** costs: the costs of implementing investment decisions by trading assets

A summary of the costs included in each category is shown in chart 2. Most of the costs considered in this report are transaction costs, however there are some other investment-related costs that fell within the scope of the project.

**Chart 2 – Summary of portfolio costs by category**

Holding costs	Managing costs	Transaction costs
Custody & other custodian services	Investment management fees	Explicit transaction costs
Fund administration	Entry & exit charges	Implicit transaction costs
Audit & accounts	Operating expenses	Set-up costs for alternative investments
Taxes and regulatory costs	Marketing & distribution	

Source: Novarca

Before discussing transaction costs in detail, we describe the other investment-related costs that were considered.

Within **holding** costs, the cost of custodian services such as foreign exchange hedging, interest income and the share of proceeds from securities lending are not always disclosed<sup>1</sup>. In foreign exchange, we do not attempt here to split out the hedging costs that are generated by individual trades in securities denominated in foreign currencies, but include them in the overall costs of portfolio hedging. The custodian should hold the necessary information for calculating holding costs.

The choice of underlying assets falls under **managing** costs. The look-through costs of underlying assets are not usually reported. For example, the direct cost of purchasing an ETF can be observed, and is a transaction cost. By contrast, the investment costs within the ETF – that is, the full costs of the trading and securities lending that take place within the ETF – are not available from standard reporting. The manager of the underlying asset should be able to provide at least some of this information. Similarly, a fund-of-funds manager will pay management fees to the managers of the underlying funds and may receive retrocessions from them; the underlying funds will also have trading costs and other costs within their own portfolios.

## TRANSACTION COSTS

Transaction costs can be divided into explicit and implicit costs.

Explicit costs are directly observable: typically prices are written into a contract and when the costs are incurred, an invoice is (or could be) generated. Examples

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<sup>1</sup> These costs could potentially be categorised as managing costs, for example asset managers may do their own currency hedging rather than use their custodian for this service. If this is the case, the asset manager holds the necessary data.

of explicit costs include brokerage fees, taxes such as stamp duty and custodian ticket fees.

Invoices cannot be issued for implicit costs. Therefore they cannot be directly observed, as they are netted off investment returns rather than being reported on a stand-alone basis. This means that the valuation of a security when it is added to the portfolio will include the implicit costs generated in purchasing that security; similarly, the profits from selling a security will be reduced by the implicit costs of the sale. Examples of implicit costs include bid-ask spreads, market impact and mark-ups on OTC instruments.

There is a qualitative as well as a quantitative aspect to implicit costs. For example, market impact measures the impact of a trade on the price of the security being traded. It therefore indicates how well the trader has placed the order in the market. In spread-only trades, all the costs of the trade are captured in the spread, including all the information about the level at which the trade was executed and the costs of execution and whether these were reasonable or not.

Table 1 lists the transaction-related costs that were identified within the investment structure. Note that not all costs are applicable to all vehicles and not all transaction costs are applicable to all transactions, however we have tried to be as exhaustive as possible. Some of these costs are easier and quicker to make transparent than others, as discussed in the next section.



Table 1 – detailed list of costs

Vehicle-level costs			
	Type	Cost	Description
Switching costs	Implicit		Cost of changing allocations to underlying portfolios e.g. selling the full holding in one underlying fund and replacing it with another fund
Transaction costs – traditional asset classes			
Asset class/venue	Type	Cost	Description
Exchange-traded e.g. equity <sup>2</sup>	Explicit	Broker commission	Share of total broker fee that is payment for executing trade
		Exchange fee	Paid to trading venue for executing on their platform; usually included in broker commission
		Settlement fee <sup>3</sup>	Cost of transfer of ownership of security; may be included in exchange fee
	Implicit	Custodian ticket fee	Cost of transfer of ownership of security; may include settlement fee
		Transaction taxes	Stamp duty and other taxes
OTC e.g. bonds	Implicit	Broker research costs	Share of total broker fee that is not payment for executing trade (e.g. payment for research, analytics, trading technology)
		Implementation shortfall <sup>4</sup>	The difference between the decision price and the execution price of a trade
	Implicit	Market impact	Change in price of security caused by the pressure of the trade (e.g. a big buy order in a market with limited liquidity will move the price up, against the buyer). May be included in implementation shortfall
		Spread	Difference between the bid and offer prices of a security
		Custodian ticket fee	Cost of transfer of ownership of security; may include settlement fee
Implicit	Exchange fee	Paid to trading venue for executing on their platform; usually included in spread	
	Settlement fee	Cost of transfer of ownership of security; may be included in exchange fee	
	Broker research costs	Share of total broker fee that is not payment for executing trade (e.g. payment for research, analytics, trading technology)	
		Implementation shortfall	The difference between the decision price and the execution price of a trade

<sup>2</sup> equity traded as principal should be treated as OTC

<sup>3</sup> either or both custodian fee and settlement fee may be observed in the trade

<sup>4</sup> see section 5 for detailed discussion of what may be included under different methodologies

Table 1 – detailed list of costs continued

Transaction costs – traditional asset classes			
Asset class/venue	Type	Cost	Description
Listed equity derivatives	Explicit	Broker commission	Share of total broker fee that is payment for executing trade
		Exchange and settlement	Paid to trading venue for executing/transferring ownership on their platform
	Implicit	Clearing costs	Any additional fee if broker trades through central clearing plus another exchange
		Transaction taxes	Stamp duty and other taxes
Spots, Forwards, Swaps, Futures	Explicit	Cost of capital	Bank charge for counterparty risk
		Implementation shortfall	The difference between the decision price and the execution price of a trade
	Implicit	Exchange and settlement	Paid to trading venue for executing/transferring ownership on their platform
		Clearing costs	Any additional fee if broker trades through central clearing and another exchange
	Explicit	Initial margin	Loan from dealer/broker
		Spread	Difference between the bid and offer prices of a security
Implicit	Cost of capital	Bank charge for counterparty risk	
	Implementation shortfall	The difference between the decision price and the execution price of a trade	

Table 1 – detailed list of costs continued

Transaction costs – alternative asset classes <sup>5</sup>			
Asset class	Type	Cost category	Description
Hedge funds	Explicit	Set-up costs	Typically legal and regulatory costs e.g. offering memorandum and prospectus
		Subscription & redemption charges	Entry and exit fees
		Early exit penalties	Charges for redeeming investment before an agreed holding period expires
	Implicit	Placement fees	Additional fees paid to third party e.g. marketer
		Break-up fees	Where such fees are paid to the manager rather than to the fund so do not revert to investor
		Liquidity premium	Cost of forced unwinding of holding by investor
Private equity	Explicit	Commission sharing	Additional commission shared between broker and third party
		Transition management and control	Costs of implementing changes to investment allocation e.g. manager change
		Set-up costs	Typically legal and regulatory costs e.g. offering memorandum and prospectus
	Implicit	Subscription & redemption charges	Entry and exit fees
		Early exit penalties	Charges for redeeming investment before an agreed holding period expires
		Placement fees	Additional fees paid to third party e.g. marketer
Private equity	Explicit	Monitoring	Providing general advisory services to the acquired company e.g. a board member
		Arrangement fees	Fee for arranging financing, usually credited to the fund but may be split with the manager
	Implicit	Liquidity premium	Cost of forced unwinding of holding by investor
Other portfolio-level costs			
	Type	Cost category	Description
Holding costs	Implicit	Foreign exchange	Cost of managing foreign currency exposure/overlays/hedging
Managing costs		Interest income	Share of interest income kept by custodian
		Securities lending	Share of securities lending income kept by custodian /manager
	Implicit	Look-through costs	Full cost of underlying asset including e.g. management fees, trading costs

Source: Novarca

<sup>5</sup> We assume that exposure to other alternative asset classes such as property and commodities is indirect, through e.g. funds and derivatives.

## 5. Determining which costs are relevant to assessing value for money

- The criteria for determining relevant costs are: is it measurable, is it material, can it be controlled or reduced
- Almost all costs can be measured either directly or using a good proxy or estimate
- Additional effort is needed to categorise some implicit costs
- Certain explicit and implicit costs cannot be influenced by the GPP provider in the short term

All the costs that had been identified were tested against the three following criteria to determine whether they were important to value-for-money decisions

### 1. CAN THE COST BE MEASURED ACCURATELY: CAN WE OBSERVE IT DIRECTLY, OR DOES A USEFUL PROXY OR ESTIMATE EXIST

For almost all transaction costs that are likely to occur within a GPP product portfolio, the answer is “yes”. Some costs can be observed directly: brokers issue invoices; the revenue share of a securities lending arrangement is written into a contract. There is a good proxy or estimate for most implicit costs, such as spreads for OTC instruments and broker estimates for market impact and implementation shortfall. These proxies are not perfect but they are a good starting point.

Some data that is needed for estimates that is not currently available as standard in the UK can be found elsewhere. Managers of alternative asset classes, such as hedge funds and private equity, reveal very little information about the full set-up costs of their investments. However additional information exists in some jurisdictions: for example, Switzerland requires private equity funds to disclose their TER.

### 2. IS THE COST MATERIAL: DOES IT HAVE A SIGNIFICANT IMPACT ON POLICYHOLDERS’ RETURNS

It is impossible to determine in advance how material each different type of transaction cost within a portfolio will be, as the total cost is driven by the turnover rate. Past levels of turnover and of charges provide some indication of expected future magnitude.

Some costs are small in absolute terms, for example custodian ticket fees may be as low as 2bp, but when adjusted for turnover they may be significant. Other costs, such as early exit fees from alternative investments, are much higher in absolute terms but are one-off costs (and less likely to be part of the asset allocation of recently-launched DC funds).

### 3. CAN THE COST BE CONTROLLED OR REDUCED: ONCE THE COST IS MADE TRANSPARENT, CAN THE GPP PROVIDER INFLUENCE IT

Once costs are made transparent, many of them can be controlled. For example, broker fees can be challenged or new contract terms agreed for securities lending.

However, even when we can measure a cost, we cannot always influence it. This is true of stamp duty and other transaction taxes. Exchange fees could also be considered “fixed” to the extent that an individual client is a price-taker, although it is possible that longer term, clients could put pressure on exchanges to lower their costs.

#### ISSUES WITH IMPLICIT COSTS

Some implicit costs are straightforward to consider. Brokers routinely prepare very accurate models of market impact, in order to develop strategies for reducing it. Others are more complicated, such as implementation shortfall (see box opposite).

Implementation shortfall has a material impact on portfolio returns and several sources of good estimates for this cost exist. However it is relatively time-consuming and expensive to measure and it is not obvious how to control or reduce implementation shortfall in the short term.

#### Implementation shortfall

Implementation shortfall was originally defined as the difference between the net returns on a paper portfolio (which does not incur any transaction costs) and the net returns on a real portfolio (which does). Several competing definitions exist but they all describe the difference between the price at which an investment manager decides to buy or sell a security and the actual price achieved when the trade is executed. Depending on the definition, different costs can be included: missed trade opportunity costs (unrealised profit/loss from the failure to complete a trade in a timely manner); delay costs (caused by having to carry part of an order over from one day to the next); market impact; commissions; netting off market movements etc.

**Can it be measured?** In order to measure implementation shortfall, we have to decide which definition to use. The different data points needed to make the calculation – the decision price, intermediate benchmark prices, the execution price, the proportion of the order filled at different prices... – must be agreed upon and collected post-trade. Collecting and analysing this data carries a cost and is often outsourced to specialist analytics firms<sup>6</sup>.

**Is it material?** Although definitions vary, it is accepted that implementation shortfall is a material cost: calculations go as high as 50+ basis points for a one-way trade.

**Can it be controlled or reduced?** Implementation shortfall is a real cost but it is not clear that anyone is benefiting from it. No-one “earns” the whole of the implementation shortfall; rather the cost is lost within the investment chain because of inefficiencies in executing trades. These inefficiencies might occur at any one of the steps in the investment chain: at the asset manager, between the asset manager and the broker, between the broker and the market and so on. Making implementation shortfall transparent could set an incentive to improve efficiency but this would be hard to quantify in the short term.

<sup>6</sup> Novarca has activities in this area

## SUMMARY TABLE

Table 2 summarises the results of testing the costs identified in table 1 against the three criteria. We also note whether or not we believe it would be practical to make each cost transparent. It is not possible for IGCs to assess value for money based on netted returns, so the more transparency that can be achieved the better their assessment will be, but there are arguments for ignoring some costs. As discussed in section 8, the Netherlands deliberately and successfully chose to keep transparency requirements simple, in order to gain consensus across the industry and to speed up delivery.

Exchange and settlement fees are a case in point. These fees have been falling over recent years. For a cost such as exchange fees, which are relatively small and cannot be influenced in the short term, it is worth considering how much effort should be put into estimating such costs on a standalone basis rather than accepting them as bundled and concentrating instead on the bigger costs.

Note that when we classify a cost as “observable”, this does not mean that the data is necessarily already accessible by the GPP provider. However we believe that this data is usually stored somewhere at the portfolio level. For example, broker costs can be made available quickly and it should be easy to achieve transparency. Placement fees are observable to the extent that they are contractual but they are not routinely collated.

We highlight in grey the costs where transparency is readily achievable in the short term and which would provide a large amount of useful information. There seem to us to be no serious obstacles to making this information available on a portfolio-by-portfolio basis to IGCs (as discussed in the next section, we believe that it would be difficult at this stage to calculate these costs for the vehicle as a whole.)

Table 2 – testing costs for their relevance to assessing value for money

Cost	Criteria 1: can the cost be measured accurately	Criteria 2: is the cost material	Criteria 3: can the cost be controlled or reduced	Transparency practical in the short term	Other comments
Switching costs	Observe	Yes	Yes	Yes	
Broker commission	Observe	Yes	Yes	Yes	
Exchange fees	Estimate	No	No	No	
Settlement cost	Estimate	No	Yes	No	
Custodian ticket fee	Observe	Yes	Yes	Yes	
Transaction taxes	Observe	Variable	No	Yes	Level of cost depends on asset class
Broker research costs	Calculate	Yes	Yes	Yes	
Market impact	Estimate	Yes	Yes	Yes	
Implementation shortfall	Estimate	Yes	No	No	Complex to define and measure
Spread	Estimate	Yes	No	Yes	
Clearing costs	Estimate	No	Yes	Yes	
Cost of capital	Estimate	No	Yes	No	
Initial margin	Estimate	Yes	Yes	No	
Set-up costs	Estimate	Yes	Yes	Yes	
Subscription & redemption charges	Observe	Yes	Yes	Yes	
Early exit penalties	Observe	Yes	Yes	Yes	One-off cost, high if it occurs
Placement fees	Observe	Yes	Yes	No	
Break-up fees	Observe	Yes	Yes	Yes	
Liquidity premium	Observe	Yes	No	No	Cannot be predicted in advance
Commission sharing	Estimate	No	Yes	No	
Transition management and control	Estimate	Yes	Yes	No	
Monitoring	Observe	Yes	Yes	No	
Arrangement fees	Observe	Yes	Yes	No	
Foreign exchange	Estimate	Yes	Yes	Yes	Requires additional data feed
Interest income	Observe	Yes	Yes	Yes	
Securities lending	Observe	Yes	Yes	Yes	
Look-through costs	Estimate	Yes	Yes	No	Complexity depends on underlying asset

Source: Novarca

## 6. Recommend a practical method for measuring these costs

- Multiple data sources and measurement methods exist – a common standard would make it easier for GPP providers to achieve transparency
- Estimates provide valuable information
- Transaction cost data already exists at the portfolio level. Some technical challenges to collecting and analysing this data remain
- Measurement can influence behaviour. There are strategies to offset this risk

In table 3 at the end of this section, we set out suggested methodologies, data sources and expected values for different transaction costs. There are competing methodologies and data sources as well as technical challenges to compiling information. We have therefore tried to choose the simplest measures even where these are just approximations.

### MULTIPLE DATA SOURCES AND METHODOLOGIES

As noted in the discussion of implementation shortfall, there are several different data sources and calculation methodologies in use to measure the different transaction costs. Both the data and the methodologies vary across asset classes, over time and by source. Equities data is more variable than fixed income data.

An EDHEC survey<sup>7</sup> of the buy-side (asset managers and hedge fund managers) from 2007 already revealed the use of 7 different benchmarks for post-trade transaction cost analysis, with analysis conducted by several different providers or internally. Among the firms that did pre-trade analysis, internal, bespoke tools were the most popular source of information.

On the sell side, many brokers have sophisticated pre-trade models to aid their trading strategies.

### Potential sources of data and calculation methodologies include

- **observation of explicit costs**
- **asset managers and their suppliers, for example custodians and dealers**
- **specialist analytical services**
- **exchanges**
- **financial data vendors**

### ESTABLISHING COMMON STANDARDS

GPP providers were unanimous in asking for common standards for calculating transaction costs. Most will have to invest in new systems to capture the transaction cost information coming from different sources, aggregate it and produce reports. They see a risk that if they each build systems around their own designs for creating transparency, they will have to change them in the future if they choose the “wrong” methodology or data source.

<sup>7</sup> Transaction Cost Analysis in Europe: Current and Best Practices, European Survey January 2007



This means agreeing on the standard calculation methodology to be used, for example using average spreads as a proxy for OTC trading costs. It then means agreeing on the standard data to be used within the calculation, such as establishing the rate for the average spread for each fixed income asset class, or the reference price to be used in equity trades (VWAP, market close etc.) In the Netherlands, the Federation of Dutch Pension funds sets the standard data (see section 8)

### Options for establishing standard data

- set by the regulator
- set by the industry
- provided by financial data providers, dealers or exchanges

We believe that providing common standards will speed up compliance and ensure that all GPP providers give their IGCs the same degree of transparency. It will also mean that data can be compared within and across GPP providers.

### USING ESTIMATES

Any common standard based on estimates will be an imperfect measure of individual scheme costs. For example, average bond spreads are a reasonable proxy for fixed income transaction costs, but the variation around the average can be high depending on transaction size, issuer rating, issuer sector, market volatility and so on.

The box opposite shows a broker's pre-trade estimate of market impact costs – the range is wide, depending on the characteristics of the trade.

Nonetheless, we believe that consensus estimates and market averages provide reliable and valuable information and can be used to provide transparency around transaction costs.

### Example of calculation methodologies: market impact

Brokers can measure market impact with considerable accuracy. The table below shows KeplerCheuvreux's predictions for the value of the market impact on trades in Bayer, as generated by their model on 25 July 2014. Predicted numbers range from 2bp to over 15bp, depending on the size and duration of the order.

#### Bayer on 25 July 2014 (bid-ask spread = 4.2bps, volatility= 14.5%)

Participation rates	5% (impact)	10% (impact)	20% (impact)
5 minutes	2bps	3.1bps	4.6bps
15 minutes	3.1bps	4.6bps	7bps
1 hour	5.2bps	7.9bps	11.8bps
2 hours	6.8bps	10.2bps	15.4bps

Source: KeplerCheuvreux QR, Our advanced market impact models for enhanced pre-trade and trading cost analysis, 15 October 2014

## DATA ACCURACY WILL INCREASE OVER TIME

We expect that data accuracy will increase over time

- GPP providers and their asset managers will put new systems in place to collect and collate a greater volume of data
- Proxies will be refined
- GPP providers and their asset managers will try to provide actual data to avoid the problems of proxies

An example of a proxy that could be refined is the spreads used to measure bond transaction costs. As a first step, using the bid-offer spread is a good proxy for OTC transaction costs. However, most trades do not take place at exactly the bid or offer price. A better proxy would be the effective spread, which measures the actual trading price and the time of trade mid-point (if the dealer does better than the quoted spread, the effective spread will be smaller than the bid-offer spread).

This is still not a perfect measure, as it does not tell us whether the timing of the trade was good (the reference itself reflects the time that the trade was executed) which is an important element of the quality of the trade.

## TECHNICAL CHALLENGES

GPP providers have told us that it is very difficult for them to calculate transaction and other costs, including explicit costs.

- They do not get complete data from their asset managers
- They do not have calculation engines to compute transaction costs from this data
- They are unable to allocate costs across schemes

These challenges can be overcome. In our experience, almost all portfolio costs are measured somewhere along the line, but a lot of this data is not collated or analysed. Asset managers should be encouraged to make the data available to GPP providers.

Even where transaction cost data is available at the portfolio level, GPP providers may be unable to allocate those costs across the various schemes they operate.

The example below reflects the current accounting framework for life and pension funds. Nevertheless, it seems unlikely that ImCo could not provide the explicit cost information at the fund level for a simple fund-of-funds structure even if the underlying funds are used in several different vehicles. However, even for a simple structure, many GPP providers would have to do most of the transaction cost calculations manually.

This is impractical for product ranges that include a large number of vehicles and structures and especially those with more complex arrangements such as blends-of-blends.

### Example of cost allocation

GPP provider LifeCo uses an in-house asset manager, ImCo, to manage several underlying funds for its schemes.

LifeCo pays ImCo a pre-determined internal charge for managing these funds. If ImCo buys £1,000,000-worth of BT shares and allocates them to three different underlying funds, it will charge the total explicit cost to LifeCo.

LifeCo does not have the middle office systems in place to attribute the right proportion of costs to each of the underlying funds and so to the relevant schemes.

GPP providers and their asset managers will have to invest in IT systems to collect data and compute costs. As a rough guide, a detailed, one-off transaction cost analysis for a diversified portfolio can cost around £50,000 (it will be cheaper for a less complicated fund). Upgrading systems to provide industrial-scale reporting for complex product ranges could cost several million pounds, depending on how powerful the GPP's existing systems are.

However, it should cost less for asset managers to provide portfolio-level data. Table 2 above showed that a relatively high level of transparency could be achieved at the portfolio level in the short term. We believe that asset managers could produce workable calculations for individual portfolios in just a few days using the data that they collect in the normal course of their operations. IT investment requirements should also be lower.

Building calculation engines is a major investment but this investment will also be useful in meeting reporting requirements that will be associated with upcoming MiFID II, PRIIPs and Solvency 2 regulations, as long as GPP providers and asset managers are able to future-proof their systems.

### MEASUREMENT CAN INFLUENCE BEHAVIOUR

There are three principal risks to the methodologies we set out in table 3.

- the standards are not equitable across asset classes
- asset managers will use other instruments to avoid transparency requirements
- “good” asset managers will be penalised by using industry-wide averages

#### *The standards are not equitable across asset classes*

The methodologies selected capture a greater proportion of transaction costs for OTC-traded securities than they do for exchange-traded securities.

A simplified equation for transaction costs is

$$\text{Transaction cost} = \text{dealer's costs} + \text{execution costs} + \text{dealer's profit} + \text{quality of trade}$$

In an OTC trade, the dealer earns his entire fee on the spread: the difference between what he pays for the security and what he then sells it on for. All the costs of the transaction are swept into the spread: the dealer's commission, his profit and any other execution costs<sup>8</sup>. The quality of the trade – how wide the spread was, how close the dealer was to the effective spread and how high other costs were – is all captured (and hidden) within the spread. In an exchange trade, the dealer also faces a spread but he charges his client an explicit fee that covers his costs and his profit. Other execution costs are also explicit, such as the custodian ticket fee. The quality of the trade is not captured by the explicit costs.

<sup>8</sup> note that we have seen examples of custodians splitting out ticket fees for bond trades

This raised concerns that OTC trades would be penalised relative to exchange trades as they would appear “more expensive”. The chart below shows sample transaction cost information using the costs highlighted in table 2.

As discussed in section 5, trade quality (implementation shortfall) in exchange-traded instruments such as equities is hard to measure. We believe that excluding it from transaction cost reporting is highly unlikely to create incentives for asset managers to invest in or trade exchange-traded instruments more frequently relative to OTC instruments.

**Chart 2 – OTC versus exchange trades transparency**

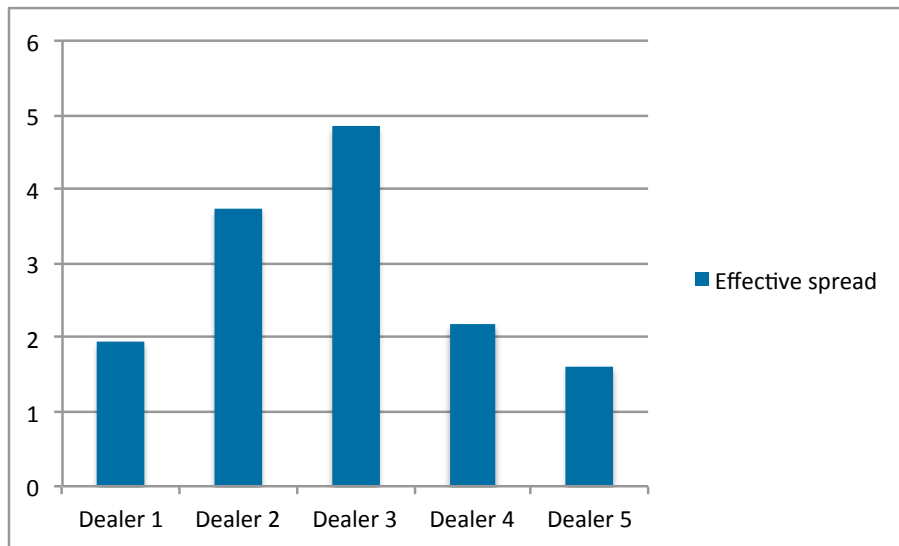
**OTC cost = spread**

**Spread = dealer’s costs + execution costs + dealer’s profit + quality of trade**

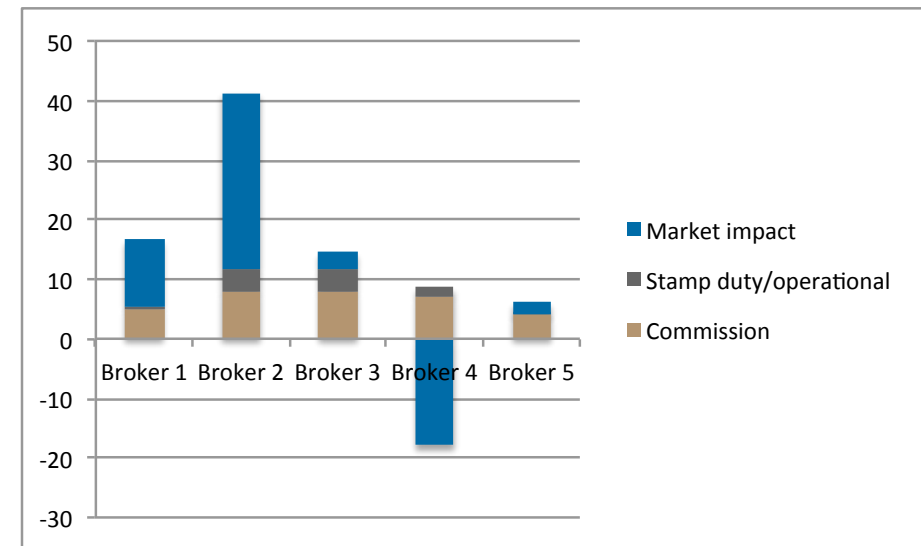
**Exchange cost = explicit costs + implicit costs**

**Explicit costs = dealer’s costs + execution costs + dealer’s profit**

**Implicit costs = quality of trade (excluded)**



Source: Novarca, not to scale



*Asset managers will use other instruments to avoid transparency requirements*

The transaction costs identified as relevant apply in the main to direct investments. An asset manager could decide to get exposure to certain asset classes indirectly, for example by buying an ETF rather than investing in individual equities or a listed private equity vehicle rather than making a commitment to a private equity fund.

In both cases, the costs incurred in buying the listed vehicle would be picked up, but the underlying fees and charges of the vehicle would not be. The underlying portfolio of the ETF will incur holding, managing and moving costs. Similarly, the full costs of a listed private equity vehicle are likely to be higher than the reported costs.

This could create distortions by encouraging asset managers to move to listed vehicles to get round transparency requirements. As discussed in section 4, including look-through costs in the definition of transaction costs mitigates this risk.

*“Good” asset managers will be penalised by using industry-wide averages*

GPP providers and their suppliers who believe themselves to be low cost are concerned that they will be penalised by common data sources that use averages. We therefore recommend that those GPP providers who are able to report accurate data about their transaction costs should be allowed to do so, rather than estimating their costs in line with the common standard.

#### COMMON STANDARDS AND DATA SOURCES

Table 3 sets out ideas for the methodology and data sources for the various cost categories.

**Table 3 – recommended measurements and expected values**

Equities	Methodology	Data Sources	Sample Value	Comment
Broker commission US large cap US small cap EU large cap EU small cap Emerging markets	Actual	Broker invoice	3 bp 8 bp 5 bp 6 bp 8 bp	Value depends on asset class and venue
Exchange fees	Standard price x number of transactions. Standard price is average of main venues	Exchange	£1-£5/trade	Flat fee depending on venue Low quality estimate
Settlement cost	Standard price x number of transactions. Standard price is average of main venues	Exchange, broker or custodian	£1/trade	Flat fee depending on venue Low quality estimate
Custodian ticket fee	Actual	Custodian invoice	2 bp – 20 bp or flat fee €500-2000	Depends on venue
Transaction taxes	Actual	Broker invoice	0% - 0.5%	UK highest
Broker research costs	Actual - calculate from broker information	Broker	up to 12 bp	
Market impact	Single value per broad asset class category e.g. large cap US equity	Brokers, specialist analysts	2 bp -10 bp	High quality estimates available
Implementation shortfall	Single value per broad asset class category	Brokers, specialist analysts	30 bp and upwards	Good estimate possible once agreement reached on methodology

**Table 3 – recommended measurements and expected values continued**

Bonds	Methodology	Data Sources	Sample Value	Comment
Spread AAA government bonds EU Investment grade EU high yield Emerging markets	Standard value established for spread for different bond categories	Financial data providers	4 - 6 bp 15 - 30 bp 50 - 90 bp 100+ bp	Depends on asset class, market conditions and venue - samples as at Q4 2014. Agreed values will be static but reliable enough to be useful
Exchange fees	Standard price x number of transactions. Standard price is average of main venues	Exchange	£1-£5/trade	Small cost, depends on venue, standard price is useful estimate
Settlement cost	Standard price x number of transactions. Standard price is average of main venues	Exchange, dealer, custodian	£1/trade	Small cost, depends on venue, standard price is useful estimate
Custodian ticket fee	Actual	Custodian invoice	2 bp – 20 bp	
Implementation shortfall	Single value agreed per broad asset class category	Dealers, specialist analysts	Not available	Good estimate possible once agreement reached on methodology

Listed equity derivatives	Measurement	Source	Sample Value	Comment
Broker commission	Actual	Broker	A few bp	Depends on order type and venue
Exchange and settlement	Standard price x number of transactions. Standard price is average of main venues	Exchange, dealer	£1-£5/lot	Low quality estimate Depends on client profile and trade type
Clearing costs	Standard price x number of transactions. Standard price is average of main venues	Exchange, dealer	£1/lot	Depends on client profile and trade type
Cost of capital	Consensus estimate	Bank/broker	Up to 20 bp	
Implementation shortfall	Single value agreed	Brokers, specialist analysts	Not available	Estimate possible once agreement reached on methodology

**Table 3 – recommended measurements and expected values continued**

Spots, forwards, swaps, futures	Measurement	Source	Sample Value	Comment
Exchange and settlement	Standard price x number of transactions. Standard price is average of main venues	Exchange, dealer	A few bp	Depends on order type and venue
Clearing costs	Standard price x number of transactions. Standard price is average of main venues	Exchange, dealer	£600/lot	Depends on client profile and trade type
Initial margin	Standard rate	Exchange	10%	
Spread	Standard value	Specialist analyst	Not available	Depends on asset class and venue
Cost of capital	Single value	Banks	Up to 20 bp	
Implementation shortfall	Single value	Brokers, specialist analysts	Not available	Estimate possible once agreement reached on methodology

Hedge funds	Measurement	Source	Sample Value	Comment
Set-up costs	Sector average	Specialist analysts	n/a	Depends on strategy
Subscription & redemption charges	Actual	Contract	n/a	Depends on fund
Early exit penalties	Actual	Contract	n/a	Depends on fund
Placement fees	Actual	Contract	n/a	Depends on fund
Break-up fees	Actual	Contract/memorandum	High if applicable	Unlikely to affect many GPP schemes
Liquidity premium	Actual ex-post	Market maker	High if applicable	Unlikely to affect many GPP schemes
Commission sharing	Sector average	Specialist analysts	n/a	Depends on fund
Transition management and control	Sector average	Specialist analysts	n/a	Depends on fund



**Table 3 – recommended measurements and expected values continued**

Private equity	Measurement	Source	Sample Value	Comment
Set-up costs	Sector average	Specialist analysts	n/a	Depends on strategy
Subscription & redemption charges	Actual	Contract	n/a	Depends on fund
Early exit penalties	Actual	Contract	n/a	Depends on fund
Placement fees	Actual	Contract	n/a	Depends on fund
Monitoring fees	Actual	Contract/mem- orandum	n/a	Depends on fund
Arrangement fees	Actual	Contract/mem- orandum	n/a	Depends on fund
Liquidity premium	Actual ex-post	Market maker	High if applicable	Unlikely to affect many GPP scheme

Other portfolio costs	Measurement	Source	Sample Value	Comment
Foreign exchange	Actual rate versus mid-price benchmark	Custodian/own desk; specialist analysts	G10 currency: circa 10 bp; Emerging currency circa 15bp	Depends on order type and currency
Interest income	Actual	Custodian	n/a	Depends on client
Securities lending	Actual	Custodian/ manager	10% - 70% of revenues	
Look-through costs	Average TER of underlying asset class	Specialist analysts	4.5% for private equity	Depends on strategy

Vehicle-level costs	Measurement	Source	Sample Value	Comment
Switching costs	Single value per switch	GPP provider	40 bp round trip	Depends on contract with manager/ platforms used

Source: Novarca

## 7. Examine how cost information can be disclosed so that value-for-money assessments can be made

- Absolute levels of cost do not tell the full story about value for money
- Additional information on investment strategy and portfolio turnover is needed
- It is difficult to get data at the vehicle/structure level. It will therefore be easier to start with portfolio-level data
- Benchmarking across schemes will provide valuable information to IGCs

Transaction cost transparency is intended to help IGCs assess the value for money they are getting from their asset managers. The absolute level of cost does not give enough information to make this assessment – it should be examined alongside other portfolio indicators and against what other, similar schemes are paying.

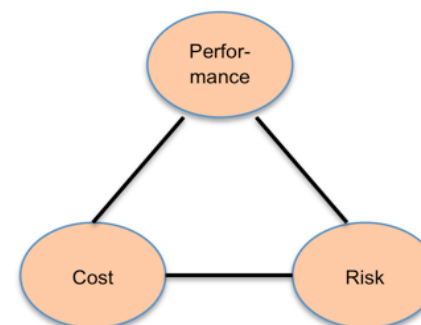
### ABSOLUTE LEVELS OF COST DO NOT TELL THE FULL STORY

Transaction costs do not exist in isolation from the investment strategy. Costs, risk and return are interdependent. It is possible to reduce transaction costs for a given strategy by negotiating better terms with brokers, custodians and other suppliers; it is not possible to reduce the transaction costs of an active emerging equity strategy to those of a passive US equity strategy.

It would be misleading to report transaction cost data without also reporting risk and return data for the portfolio. A passively managed, AAA bond fund will necessarily have lower transaction costs than an actively managed, emerging markets equity fund. This does not imply that the bond fund offers better value for money than the equity fund.

Reporting cost, performance and risk together, rather than transaction costs alone, would address asset managers' concerns that the role of transactions in generating performance is underestimated: "Transaction costs do not necessarily reduce returns. The net impact of dealing is the combination of the effectiveness of the manager's investment decisions in improving returns and the associated costs of investment".<sup>9</sup>

**Chart 3: costs do not exist in isolation**



<sup>9</sup> <http://www.legalandgeneral.com/investments/fund-information/charges-and-fees-explained/transaction-costs-and-taxes/>

The impact of different asset classes on costs is illustrated in chart 4. This shows the estimated transaction costs for a theoretical balanced fund with £150 million invested in an asset mix of 80% equities and 20% fixed income. We assume that turnover is very low, at 15% per annum for all asset classes and that there are no rebalancing costs.

We can see that the riskier fixed income asset classes, emerging markets and high yield, add considerably to overall transaction costs despite their low weights in the portfolio.

Chart 4: transaction costs with low turnover

Portfolio size £150,000,000								
Equity allocation 80%	Weight (%)	Broker costs (bp)	Taxes/other (bp)	Market Impact (bp)	Custodian ticket (bp)	Turnover (%)	Total cost (bp)	
Equity	100%	15.0	8.0	7.0	4.0	15%	10.2	
Total cost equity (bp)							<b>10.2</b>	£122,400 Amount
Fixed income allocation 20%	Weight (%)	Spread (bps)	Turnover (%)				Total cost (bp)	
European government	50%	3.0	15%				0.9	
European IG	25%	20.0	15%				6.0	
European High Yield	15%	75.0	15%				22.5	
Emerging markets	10%	100.0	15%				30.0	
Total cost fixed income (bp)							<b>8.3</b>	£24,975 Amount
<b>Total cost portfolio (bp)</b>							<b>9.8</b>	<b>£147,375</b> Amount

Source: Novarca, note that data used is for illustration only and is not from an actual portfolio

This example also underlines the importance of knowing the level of turnover in the portfolio: chart 5 shows that increasing the turnover rate has a marked effect on total costs. Many of the newer schemes use low-turnover funds, but

we include this example as older schemes may be invested in funds that are more actively managed.

**Chart 5: transaction costs with high turnover**

Portfolio size £150,000,000								
Equity allocation 80%	Weight (%)	Broker Costs (bp)	Taxes/other (bp)	Market Impact (bp)	Custodian ticket (bp)	Turnover (%)	Total cost (bp)	
Equity	100%	15.0	8.0	7.0	4.0	100%	68.0	
Total cost equity (bp)							<b>68.0</b>	£816,000 Amount
Fixed income allocation 20%	Weight (%)	Spread (bps)	Turnover (%)				Total cost (bp)	
European government	50%	3.0	30%				1.8	
European IG	25%	20.0	50%				20.0	
European High Yield	15%	75.0	100%				150.0	
Emerging markets	10%	100.0	100%				200.0	
Total cost fixed income (bp)							<b>48.4</b>	£145,200 Amount
<b>Total cost portfolio (bp)</b>							<b>64.1</b>	<b>£961,200</b> Amount

Source: Novarca, note that data used is for illustration only and is not from an actual portfolio

## PORTFOLIO-LEVEL VERSUS SCHEME-LEVEL DATA

We discussed in section 6 the challenges of aggregating transaction cost data at the vehicle level. However the data is much more readily available at the underlying portfolio level, especially the eight cost categories we identified in table 2 as being relatively easy to make transparent and as providing a lot of useful information: broker commission, custodian ticket fees, stamp duty and other taxes, market impact and spread.

Providing this information to IGCs on a portfolio-level basis would enable them to

- Compare across providers within an asset class
  - for example, are all managers with US large cap equity exposure generating the same level of transaction costs
  - if not, is this due to differences in the turnover rate or to differences in fee levels?
- Compare across asset classes
  - in conjunction with the risk and return data discussed above, are the US large cap equity managers getting the same value for money from their transactions as the emerging market bond managers
  - if not, is this due to the nature of the asset class or the behaviour of the managers?
- Make scheme-level estimates based on the overall asset allocation and the average costs of the underlying asset classes as revealed at the portfolio level

## BENCHMARKING ACROSS SCHEMES

As well as comparing the costs reported by their own asset managers, it would be valuable for IGCs to be able to compare their costs to those of other GPP providers.

A benchmark can be constructed for broad investment categories (private equity, active large cap equity...) by taking the average of the figures reported to IGCs (and potentially other trustee-type bodies e.g. master trusts). The benchmark would not be perfect

1. it would be biased by the weight of the largest in-house asset managers, which could penalise smaller external managers
2. transaction costs are currently under-reported so the average would probably understate true costs initially

However it would give IGCs additional insight into the behaviour of their underlying managers in relation to transactions.

The reporting templates illustrated in section 9 are designed to capture cost data in a format suitable for benchmarking as well as for internal use by IGCs.

### Chart 6: benchmarking example

Schemes A and B each have assets of £500 million. Scheme A has transaction costs of 15bp and Scheme B has transaction costs of 45bp.

Scheme B appears to be delivering better value for money: it has higher transaction costs, but these are the result of a more aggressive asset allocation that has translated into higher net returns; it is also generating more outperformance.

	Scheme A	Scheme B
Transaction costs (bps)	15	45
Asset allocation		
• Equity	35%	50%
• Fixed Income	60%	30%
• Alternatives	5%	20%
Net return (bps)	700	1,000
of which, outperformance (bps)	20	60

However, if benchmarks exist for each strategy type and we now add benchmark costs to the data set, we can see that Scheme B is performing worse than Scheme A on transaction costs, even while it is generating higher returns.

We cannot draw conclusions from this information as to which is the better scheme, but the IGCs can see whether there are any improvements that could be made in relation to their transaction costs.

	Scheme A	Scheme B
Transaction costs (bps)	15	45
<b>Benchmark transaction costs</b>	<b>18</b>	<b>35</b>
Asset allocation		
• Equity	35%	50%
• Fixed Income	60%	30%
• Alternatives	5%	20%
Net return (bps)	700	1,000
of which, outperformance (bps)	20	60

Source: Novarca, illustration only

## 8. Pension cost transparency in the Netherlands

- The implementation of transparency requirements in the Netherlands illustrates some practical issues and possible solutions
- Transaction cost transparency has deliberately been kept simple in order to get the process started
- GPP providers and their suppliers are involved in the process and compliance levels are high
- Governing bodies are acting on the information they receive through the transparency reporting

The Dutch pensions industry has been reporting on transaction costs since 2011. The move towards transparency has been led by the industry and the regulator, the AMF, has introduced a “comply or explain” model based on the industry’s recommendations. Over 90% of pension schemes by assets report their transaction costs according to the transparency standards introduced over the past three years.

### PRACTICAL ISSUES AND SOLUTIONS

#### 1. Calculating data at the portfolio level

Reporting requirements have deliberately been kept simple, to encourage pension schemes and their suppliers to comply with the requirements.

In particular, transaction costs within public funds – the bulk of industry assets – are not measured. Entry/exit fees are used as a proxy, so transactions that occur during the holding period are not captured. Within mandates, explicit costs are captured for equities and the regulator has set common standards for OTC instruments.

This policy is now under review and the industry is preparing methodologies for measuring and reporting transaction costs within funds, including implementation shortfall.

#### 2. Data flows from suppliers

Asset managers and other industry participants such as auditors and brokers have been involved in the discussions around transparency standards. The industry expects that its suppliers will be prepared to provide the enhanced level of cost transparency that will be required in future.

#### 3. Collating data at the scheme level

This is less problematic in the Netherlands than in the UK. The industry in the Netherlands is dominated by a small number of large DB funds that account for the bulk of assets under management and that have comparatively few different vehicles and structures.

#### 4. Establishing common standards

The regulator has set common methodologies that are applied across the industry.

**Table 4: Netherlands common methodologies**

Asset class	Standard
Equity	Broker invoice + taxes
Bonds	Transaction value x (spread/2)
Swaps	Notional value x (spread/2) x duration
Foreign exchange	Fair value x FX rate x 0.5 bp
Direct investment in alternatives	Fees paid

Source: Recommendations on administrative costs Further elaboration on asset management costs 2012, Dutch Federation of Pension Funds

Pension funds can choose one of three measurements for bond spreads:

1. the actual spread of the individual transaction
2. the average spread of the previous quarter
3. the standard spread

The standard spread table was found to give a reasonable estimate of bond transaction costs but a number of pension funds prefer to use actual costs.

**Table 5: Netherlands standard spread table**

Bond type	Spread (%)
AAA government bonds	0.10
EMU government bonds	0.35
Corporate bonds	0.35
High yield	0.50
Emerging market	0.50

Source: Recommendations on administrative costs Further elaboration on asset management costs 2012, Dutch Federation of Pension Funds



## 5. Reporting and benchmarking

Pension funds have to report according to the definitions established by the regulator so that benchmarks can be prepared. There is a “comply or explain” requirement – pension funds must explain large deviations from the benchmark to the regulator – and the following factors are taken into account when making the comparison with the benchmark

- asset allocation
- active or passive style
- direct or indirect investment
- scale (<€1 billion; €1-5 billion; >€5 billion)

Asset management costs are reported in relation to risk and return.

The benchmark covers asset management costs and administrative costs as well as transaction costs (potential economies of scale are particularly relevant to administration costs). In the Netherlands, some administration costs that fall under the charge cap in the UK are reported separately and on a € per member basis, to reflect the fact that different communication strategies are appropriate for different membership profiles (active members, retirees...)

## RESULTS

The move towards greater transparency has been very successful in terms of providing information to pension boards and the regulator and in building public confidence.

It has also resulted in an improvement in the quality of cost reporting: table 6 shows the total costs of asset management reported by Dutch pension funds since 2010. There was a step change in transparency between 2010 and 2011. Additionally, pension funds have taken action based on this information to reduce costs, either by improving fee structures or by changing asset allocation.

**Table 6: total costs reported by major Dutch pension funds**

Pension Fund	Costs of asset management 2010	Costs of asset management 2011	Costs of asset management 2012	Costs of asset management 2013
	(In bps)	(In bps)	(In bps)	(In bps)
<b>ABP</b>	<b>39</b>	<b>64</b>	<b>73</b>	<b>76</b>
<b>PFZW</b>	<b>48</b>	<b>55</b>	<b>57</b>	<b>61</b>
<b>PMT</b>	<b>17</b>	<b>62</b>	<b>54</b>	<b>40</b>
<b>BPF Bouw</b>	<b>52</b>	<b>46</b>	<b>50</b>	<b>58</b>
<b>PME</b>	<b>70</b>	<b>53</b>	<b>37</b>	<b>29</b>

Source: Institutional Benchmarking Institute

## 9. Reporting templates

Chart 7 shows a reporting template that captures the data that we believe provides the bulk of the information required by IGCs and is easiest to collect.

This data is presented at the portfolio level, given the technical constraints outlined in section 6.

**Chart 7: portfolio-level transaction-cost reporting template for rapid introduction**

Transaction cost report 2014									
Asset class: Large cap developed market equity									
	Average AUM (£)	Broker costs (bp) <sup>1</sup>	Custodian ticket fees (bp) <sup>1</sup>	Taxes (bp) <sup>1</sup>	Market impact (bp) <sup>2</sup>	Total trading cost (bp)	Return (%)	Risk (%)	Turnover (%) <sup>1</sup>
Asset manager A									
Asset manager B									
Asset class: Investment grade credit									
	Average AUM (£)	Spread (bp) <sup>3</sup>				Total trading cost (bp)	Return (%)	Risk (%)	Turnover (%) <sup>1</sup>
Asset manager C									
Asset manager D									
	Securities lending (bp) <sup>1</sup>								
	revenue	paid out	% share						
Asset manager A									
Asset manager B									
Asset manager C									

Notes: <sup>1</sup> actual data; <sup>2</sup> estimate from supplier X; <sup>3</sup> state whether estimated or actual data

Chart 8 shows a template that captures scheme-level data (as this becomes available) and allows benchmarking across schemes of both portfolio costs and other costs.

As GPP providers and asset managers become better at collecting and collating data, it will be possible to include more implicit costs in the portfolio-level reports and to calculate totals at the level of the scheme.

Portfolio-level costs are reported by asset class, building on the data gathered in chart 7. This means that IGCs can benchmark themselves against other GPP providers while taking into account the important differences in underlying investment strategies. Given the expected differences between the results for active versus passive portfolios, there is an argument for keeping the reporting for the two investment styles separate.

The template includes data that is outside the scope of this report, such as asset management fees, but that is important in assessing value for money. The template thus gives IGCs a broad overview of the most relevant costs, including some costs that fall within the charge cap.

The data is very similar to what is collected in the Netherlands, although as discussed above their transaction cost data is less granular, and holding costs are reported in less detail.

Chart 8: scheme-level value-for-money cost reporting template

Cost report 2014										
Total AUM: £		Total costs: £								
Vehicle/structure costs										
	bp	Total								
Switching										
Portfolio-level costs										
Holding costs	Custody (bp)	Securities lending		Interest income		Foreign exchange (bp)	Fund administration (bp)	Audit (bp)	Tax/regulatory (bp)	Total holding costs (bp)
		Income (bp)	Paid out (%)	Income (bp)	Paid out (%)					
All assets										
Managing costs	AUM (£)	Asset management fees (bp)	Performance fees (bp)*	Look-through costs (bp)*	Total managing costs (bp)					
	Developed equity <sup>10</sup>									
	Fixed income									
	Private equity									
	Commodities									
	etc...									
Transaction costs	Broker costs (bp)	Custodian ticket fees (bp)	Taxes (bp)	Market impact (bp)	Spread (bp)	Total transaction costs (bp)	Total managing plus transaction costs (bp)	Return (%)	Risk (%)	Turnover (%)
	Developed equity									
	Fixed income									
	Private equity									
	Commodities									
	etc...									
*if applicable										

<sup>10</sup> illustration only, categories to be determined, e.g. inclusion of currency overlays

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