

UNDERSTANDING EQUITY TURNOVER DATA: INITIAL FINDINGS FROM IMA RESEARCH SUBMITTED TO THE KAY REVIEW

1. There are a number of analyses that have referred to general equity turnover figures as evidence of investor short-termism, most recently a paper by the OECD.¹ The IMA believes that conclusions in this area are sometimes drawn without sufficient analysis of underlying behaviour. This short paper on turnover levels and investor behaviour attempts to shine some light on the meaning of transaction data in the debate over corporate governance and short-termism.
2. Our analysis needs to be prefaced by a number of comments about the nature of portfolio management in equity markets. Active equity managers take views on the market and on individual companies within the market, and they operate very diverse strategies to achieve their objectives. Their activities help to facilitate the efficient operation of financial markets, but primarily they have a responsibility to clients to fulfil the mandate that they have been given.
3. This responsibility to clients means that investment managers will not buy and hold stocks indefinitely, but neither do they have incentives excessively to trade within portfolios. At the same time, it is important to underline that owning a stock does not mean that asset managers can easily - or indeed would want to - steer company management in a specific direction. This does not reflect either the reality of how companies operate or the reality of highly fragmented holdings among a mixture of UK and international players. These issues are addressed in more detail in the main IMA response to the Kay Review Call for Evidence.
4. The analysis that follows is based on initial findings from IMA research. It is in two parts. The first looks in general terms at the position of investment managers within the broader equity market. The second looks in more detail at investment manager portfolio behaviour and the various techniques which seek to measure it.

PART ONE: Broad Market Structure

1. Investment managers are one group of market participants among many, which include hedge funds, the proprietary trading desks of investment banks, independent high frequency traders and retail investors.² Indeed, the asset weight of investment managers in the UK equity market (just under 40% of total domestic market capitalisation) is not

¹ Raffaella Della Croce, Fiona Stewart and Juan Yermo, "Promoting Longer-Term Investment by Institutional Investors: Selected Issues and Policies", OECD Journal: Financial Market Trends, 2011/1.

² By investment managers, we mean what has traditionally been described as the long-only industry. The range of investment techniques currently employed by the industry make this term something of a misnomer, but is useful at a general level to distinguish particularly from self-categorised hedge funds and from proprietary trading desks within investment banking companies.

reflected in estimates of trading volume, where long-only investors are thought to account for only 25% of daily turnover.³

2. In other words, estimates of market turnover derived from stock exchange aggregate trading data are a reflection of the wider market - including some ultra short-term participants - not of the behaviour of investment managers specifically, and it would be misleading to derive any conclusions in this regard.
3. Given the stamp duty exemption for market makers and the fact that derivatives-based exposure to the UK equity market is not widely used by investment managers, one rudimentary calculation to gauge turnover by the latter would be to look at stamp duty receipts from HMT. Although these receipts will also include stamp-qualifying activity by other groups, eg. retail investors, these investors account for a much smaller proportion of market turnover activity.
4. We present the stamp duty calculation in Table One, in which we also include implied holding periods over the last ten years.⁴ This does not suggest that holding periods have got shorter. On the contrary, it suggests little significant change, with spikes in activity during periods of market turbulence, which are a feature of historic UK equity trading data.⁵ However, as we explore in more detail in Part Two of this paper, aggregate data on the turnover of shares are an inaccurate proxy for data on the dynamics of holdings in individual companies.

Table One: Implied holding periods from stamp duty receipts

Tax year	Value of share purchases as % of average value of UK listed companies	Implied average holding period of companies (months)
2001-2	36%	33
2002-3	42%	29
2003-4	40%	30
2004-5	36%	33
2005-6	30%	40
2006-7	26%	46
2007-8	26%	46
2008-9	35%	34
2009-10	27%	44

Source: UK National Statistics, London Stock Exchange and IMA calculations

³ Data on investment managers' holdings in the UK equity market are sourced from the 2010-2011 IMA Annual Asset Management Survey and are based on an analysis of the assets managed in the UK by IMA members. Data on daily turnover is sourced from TABB Group "Breaking Down the UK Equity Market", January 2011.

⁴ We take stamp duty receipts in available tax years and gross them to calculate the value of shares purchased. We then look at the average value of UK listed companies over the same period and derive an activity level. This can be used to imply a holding period.

⁵ See, for example, the ONS and WM All Funds Universe results (as produced by State Street Investment Analytics) published in "Pension Fund Indicators" (UBS, annual report).

PART TWO: Portfolio Turnover Figures and Investment Manager Behaviour

5. This section begins with an assessment of the leading methods for calculating portfolio turnover. It then looks at why these are inappropriate indicators in the short-termism debate, and presents some alternative viewpoints as to how better to understand the extent and timeframe of exposure to individual companies.

Official definitions of turnover

6. The portfolio turnover ratio (PTR) has until recently been a widely disseminated measure required under regulations governing European investment funds – Undertakings for Collective Investment in Transferable Securities (UCITS). There are also regulations governing disclosure adopted by the United States Securities and Exchange Commission (SEC). The UCITS and SEC definitions of the PTR are provided in Figure One.

Figure One: Two leading turnover definitions

UCITS definition	SEC definition
(Purchases of securities + Sale of securities) – (Subscription of shares + Redemption of shares)	(Lesser of purchases and sales)
DIVIDED BY:	DIVIDED BY
(Average Fund value over 12 months)	(Average Fund value over 12 months)

7. Despite being widely used to derive holding periods, this is not the purpose of the PTR. On the contrary, both the UCITS and SEC definitions were adopted with the clearly stated regulatory intention to provide investors with an indicator of the impact of trading costs within a given fund.⁶ However, due to concerns about its utility for retail investors, publication of the PTR will no longer be a requirement in the Key Investor Information Document (KIID), a document designed to give information to investors in UCITS in a clear and understandable manner.⁷
8. There are a number of specific problems with the PTR calculation adopted for UCITS, notably:
- a. A 200% figure implies the turnover of all securities within a portfolio over the course of a year. A figure of 100% would arguably be more intuitive to indicate that all stocks had been replaced.

⁶ European Commission Recommendation 2004/384/EC on the contents of the simplified prospectus stated in its Recital 9, that "...it is desirable to disclose the portfolio turnover rate calculated on a standardised basis, as an additional indicator of the relevance of transaction costs". Similarly, the SEC states in its 2009 Final Rule on Enhanced disclosure and new prospectus delivery option for registered open-end management investment companies that "... concerns have been expressed in recent years regarding the degree to which investors understand the effect of portfolio turnover, and the resulting transaction costs, on fund expenses and performance. The requirement to provide brief portfolio turnover disclosure in the summary section of the prospectus is intended to address these concerns".

⁷ See, in particular, CESR's advice to the European Commission on the content and form of Key Information Document disclosures for UCITS, February 2008.

- b. The impact of inflows and outflows can result in negative figures that reveal little about activity within a given portfolio.⁸
 - c. Distortions in turnover data can also arise as a result of investment mechanisms that have little to do with underlying portfolio decisions. For example, cash could be held in money market funds, generating a significant contribution to the PTR while being unrelated to core investment issues.
9. Partly for these reasons, the UCITS definition is not universally used either by regulators internationally or EU-based performance measurement companies. Lipper, notably, prefers the SEC definition (see Figure One). Here, buying and selling the whole portfolio once in a year would result in a turnover figure of 100%.
10. Whether the UCITS or the SEC definition is used, the principal issue in this context is the frequent use of turnover data for the purposes of implying something about investment decisions, notably holding periods for individual securities. Certainly, average turnover measures can tell you something about transactions in securities, albeit in a confusing manner in the case of the UCITS definition. However, they can tell you nothing about turnover in individual company holdings.
11. Despite this critical limitation, high stated turnover rates have given rise to accusations of a 'short-termist perspective', which are seen to have a detrimental impact on shareholder engagement and corporate governance.⁹

Alternative ways of looking at turnover

12. It is important in the first instance to recognise that the turnover calculations above cannot differentiate the holding period of stocks from the holding period of companies. If funds are adjusting their exposure to individual companies (contributing to higher turnover), rather than completely selling out of companies and making new investments elsewhere, this will not be captured in the conventional formulae.¹⁰
13. To illustrate this point and better understand the limitations of the PTR, we selected one fund at random from the top ten best-selling UK equity funds (Fund A). Its recent stated UCITS PTR has been slightly over 100%, implying that the fund turns over completely every two years. A different picture emerges if one instead looks at the number of continuously held companies (see Table Two overleaf):
- a. Of the companies held in 2011, some 75% were in the portfolio a year earlier, accounting for an average of 82% of the holdings by market value.
 - b. This drops to 56% of companies held continuously for two years, but accounts for 68% by value.
14. This data implies a far more complicated pattern of holdings, with significant variations in holding periods between stocks as well as significant trading volume in continuously held stocks. A considerable part of this volume may be involuntary (ie. driven by inflows and

⁸ For an explanation of this issue, see: <http://www.morningstar.co.uk/uk/news/articles/100747/We-Will-Miss-Portfolio-Turnover-Rates.aspx>.

⁹ For a recent example, see "Brussels drubs managers over short-termism", The Financial Times, April 24, 2011.

¹⁰ See also, "Some Thoughts on the Subject of Pension Fund Activity and 'Short-termism'", State Street Analytics / The WM Company, February 1997.

outflows) rather than discretionary (ie. a result of the portfolio manager's investment decisions).

Table Two: Fund A (UK retail fund) holding periods by number of companies and weight within portfolio (June 2011)

Stocks in portfolio as at June 2011, held for:	Proportion of continuously held individual companies	Value of continuously held stocks (% total stocks)
1 year	75%	82%
2 years	56%	68%
3 years or more	42%	54%

Source: Morningstar

15. We explore portfolio behaviour in more detail in Table Three, based on a dataset looking back ten years for a relatively concentrated institutional equity fund (Fund B). The Table shows the turnover level and holding periods of individual stocks, as well as their weight by value within the portfolio. For example, as at the end of 2010, 24 out of 37 companies had been held for two years or more, representing 78% of the portfolio by value; 16 had been held for four years or more, representing 56% of the total portfolio by value, and so on.

Table Three: Fund B (UK institutional fund) holding periods by number of companies and weight within portfolio (2006-2010)

Period	Turnover (SEC definition)	Total # Holdings in Portfolio		Holding period (years)									
				≥1	≥2	≥3	≥4	≥5	≥6	≥7	≥8	≥9	≥10
End 2010	26%	37	# holdings	31	24	20	16	13	11	9	8	8	8
			% portfolio value	96.0	78.1	68.2	56.3	46.5	43.2	35.1	33.1	33.1	33.1
End 2009	41%	39	# holdings	34	23	19	15	13	10	9	9	9	
			% portfolio value	94.2	78.1	66.3	52.9	50.6	39.1	37.2	37.2	37.2	
End 2008	61%	39	# holdings	31	25	16	12	9	8	8	8		
			% portfolio value	93.1	84.8	64.4	60.7	50.0	47.2	47.2	47.2		
End 2007	67%	54	# holdings	42	25	17	12	11	10	10			
			% portfolio value	85.1	60.6	53.8	36.2	33.8	33.2	33.2			
End 2006	64%	62	# holdings	35	24	17	14	13	13				
			% portfolio value	76.3	66.2	50.4	47.5	46.6	46.6				

Source: IMA member data

16. Looking further at the data for 2010, the turnover (under the SEC definition) was 26%, implying in a rudimentary way total stock turnover every four years. With 16 out of 37 stocks held for four years or more, the raw holdings data are not at first glance entirely incompatible with an average holding period of around four years.
17. However, this compatibility is both coincidental and misleading for two key reasons:
- Looking purely at the change in the number of company holdings presents a partial picture at best, and one that significantly under-represents the proportion of continuously held stocks in a portfolio. The weighted value of continuous holdings provides a more nuanced way of interpreting behaviour. For example, as at the end of 2010, just under half of the Fund B portfolio by value had been held for at least five years and a third for at least ten; in 2008, a similar proportion had been held for at least eight years.
 - The turnover figure of 26% for 2010 reflects the lesser of sales and purchases divided by average fund value. In this case, purchases are the lower figure, but as shown in Table Four, 83% of purchases by value were in existing positions (ie. only 17% were in new companies). Indeed, trading activity (and hence turnover data) in Fund B is being driven primarily by increasing or decreasing continuously held positions, not selling out of them entirely and/or buying new companies. Over a ten-year period, 62% of total purchases by value were in stocks already within the portfolio. Unfortunately though, it is not possible to separate changes in portfolios due to flows from changes arising solely because of decisions to adjust the portfolio.

Table Four: Fund B (UK institutional fund) proportion of total transactions by type and value of transaction (2001-2010)

	TOTAL SALES		TOTAL PURCHASES	
	Closed positions (% total sales)	Decreased positions (% total sales)	Increased positions (% total purchases)	New positions (% total purchases)
2001	51%	49%	58%	42%
2002	60%	40%	60%	40%
2003	52%	48%	55%	45%
2004	62%	38%	53%	47%
2005	45%	55%	57%	43%
2006	53%	47%	46%	54%
2007	49%	51%	65%	35%
2008	47%	53%	84%	16%
2009	28%	72%	56%	44%
2010	30%	70%	83%	17%
Ten-year period	48%	52%	62%	38%

Source: IMA member data

18. In order to put this into a wider perspective, we analysed available data for the largest actively managed funds in the IMA UK All Companies Sector. This provided a sample of 30 funds, which accounted for a total of £36.3bn under management as at August 2011, over 50% of total actively managed funds under management in the sector. The funds range in size from £496m to £6.4bn.
19. Our findings are illustrated in Table Five. Taking 2010-2011 in isolation, the percentage of continuous holdings as a proportion of total number of companies across the fund sample (71%) might initially suggest that a portfolio turns over completely in 41 months.¹¹ However, if we look at 5-year continuous holding data, this total portfolio turnover period increases to 74 months. This difference highlights the fact that the probability of continuing to hold an individual stock is in general terms unrelated to the time it has been held. We would not therefore anticipate consistent implied holding periods across multi-year data.
20. At the same time, the table also suggests that there is a reasonably steady attrition rate within portfolios with little sign at first sight of significant core holdings that are held for much longer than say five years. However, the data from Fund B above, shows something quite different: core long-term holdings that have a substantial weight within the portfolio in terms of value and proportion of overall companies held. Here, one would therefore expect the curve implied by the columns of Table 5 to flatten after a few years and decline much more slowly.

Table Five: Analysis of available holding periods for the largest actively managed UK All Companies funds¹²

	Continuous holdings as % of total number of companies	Continuous holdings as % of average value of total equity holdings
2010-2011 (1 year to 2011)	71%	86%
2009-2011 (2 years to 2011)	49%	71%
2008-2011 (3 years to 2011)	36%	60%
2007-2011 (4 years to 2011)	28%	52%
2006-2011 (5 years to 2011)	19%	42%

Source: Morningstar, IMA calculations

¹¹ This is calculated as (measurement period in months) / (1 - % of continuous holdings). In other words, if 71% of companies are held continuously for 12 months (and by implication 29% were sold), this could be used to imply that it would take 41 months for the portfolio to completely turn over. Similarly, if 19% of companies were held for five years (and by implication 81% were sold over this period), then a consistent rate of turnover would see the portfolio totally change in 74 months.

¹² Available data on holding periods across the 30 funds varies considerably. The data presented here is for a sub-set of 10 funds (with total funds under management of £15.8bn) where data was available for 5 years. However, there is little significant variation between the 1-4 year findings for this sub-set and the larger samples.

CONCLUSIONS

21. The analysis to date suggests the following broad conclusions:

- a. Given the wide range of market participants, market level turnover is not an appropriate indicator of the trading behaviour of discretionary investment managers. This behaviour needs to be analysed at portfolio level.
- b. A number of analyses have used official portfolio turnover measures to imply stock holding periods. These measures calculate trading activity. They were not intended to be informative about holding periods, and are not an accurate indicator of investment behaviour in this respect.
- c. In the absence of readily available detailed transaction data, we have used annual holding data to calculate the number of continuously-held companies and their value weighting within portfolios. These give a better indication than PTR measures of how portfolios evolve over time.
- d. The data cannot in aggregate offer a conclusive picture of holding periods of companies by individual managers. Nonetheless, analysis of funds in the UK All Companies Sector suggests that 42% of companies by value weight within the portfolio are held for five years or more. This shows that the picture of continuous churn (and hence potential instability in company share registers) that might be implied by headline portfolio turnover numbers is misleading.