Momentum, Disposition, and tax-loss selling: the UK evidence

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In this paper we explore the seasonality of UK momentum returns. We find evidence of very high momentum returns during March followed by negative returns during April. This seasonality is driven by substantial swings in performance for the Loser portfolio, with loser stocks performing very poorly during March before bouncing back in April. This pattern is what we would expect to result from tax-loss selling by individual investors and as such supports the Grinblatt and Han's (2004) explanation for momentum that is based on disposition trading. Poor January momentum returns are not so easily explained.

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Introduction

Since the seminal work of Jegadeesh and Titman (1993) a substantial empirical literature has confirmed that the positive persistence of extreme returns that gives rise to the phenomenon of momentum is a global phenomenon that represents a significant challenge to orthodox approaches to asset pricing. The theoretical literature is noteworthy for the variety of explanations and predictions. Competing models have drawn from the full range of the behavioural finance toolbox. Models have been based on assumptions regarding feedback trading, news dissemination, and an array of heuristics and biases. Not surprisingly, these have given rise to a variety of predictions, including underreaction, overreaction, and delayed overreaction that should enable empirical tests to differentiate between alternative explanations. And yet the evidence is not conclusive.

A striking feature of the empirical evidence is the presence of a persistent seasonal element to momentum returns with negligible or negative momentum returns occurring during the month of January. Despite the global nature of this seasonality, it remains a footnote to most studies of momentum. It is difficult to reconcile such seasonalities with most theoretical explanations of momentum since although the behaviour underlying the theoretical models may conceivably vary across time, it is not clear why this behaviour should vary systematically during the month of January.

One exception is the explanation based on prospect theory and mental accounting that give rise to the disposition effect and in turn offer an explanation for momentum. In a series of papers, Grinblatt and Moskowitz (2004) and Grinblatt and Han (2004) demonstrate that investors' preference to selling past winners before past losers, otherwise known as the disposition effect, can give rise to a momentum effect. The authors note that in conjunction with tax-loss selling, disposition trading is reduced during the end of the tax-year. This gives rise to the prediction that momentum profits are enhanced at the end of the tax year but are absent, or negative, at the start of the new tax year.

In this paper we use UK data to test this hypothesis. The UK offers an interesting testing ground for hypotheses related to tax-loss selling because there are two tax years. For the corporate sector the tax year is generally January to December, but for individuals the tax year runs from April to March. Moreover, capital gains tax (CGT) was only introduced from 1965, since when there have been a series of reforms to the tax that enable a more rigorous testing of the tax-loss selling hypothesis.

Literature Review

Although most empirical evidence relates to the US, studies by Rouwenhorst (1998) and Griffin, Ji and Martin (2005) have confirmed momentum to be a universal phenomenon, with the latter demonstrating that momentum returns in January are often negative.[1] Two studies have looked at the UK in greater detail. Liu et al. (1999) find significant momentum during the period 1977-1996 that are not explained by size, price, book-to-market, or earnings-to-price effects. They also note that negative January momentum returns are due to high positive returns for loser portfolios during that month. Hon and Tonks (2003) expand the database to cover the period 1955-1996. They confirm the presence of significant momentum during 1977-1996, but find that momentum is not present during the period 1955-1976. Although they conclude that momentum is not a general feature of the UK market, it is worth noting that they do not attempt to identify a breakpoint. Rather, their sub-samples are defined simply to enable comparison with the earlier study conducted by Liu et al.

Daniel, Hirshlerifer, and Subrahmanyam(1998) distinguish between private and public information. Investors are assumed to be subject to over-confidence and self-attribution bias, but they are nevertheless described as "quasi-rational" since they follow a Bayesian optimisation strategy that is based on an exaggeration of the accuracy of private information. Daniel et al. demonstrate that this gives rise to a momentum effect as stock prices overreact to private information and underreact to public signals.

Barberis, Shleifer, and Vishny (1998) combine the conservatism bias, according to which investors underreact to information, with the representative heuristic which causes investors to overreact to persistent good or bad news. This combination results in what has been described as gradual overreaction.

A quite different approach is adopted by Hong and Stein (1999). Instead of relying on biases and heuristics, they allow for heterogeneous investors. Their model differs from the conventional noise trader framework in so far as the "rational" investors are boundedly rational as they monitor news but ignore information from past price histories. In contrast, the noise traders extrapolate on the basis of past price trends. In this model, underreaction is due to slow diffusion of information, particularly regarding bad news, amongst newswatchers, while overreaction results from the positive feedback trading of momentum traders.

The aforementioned papers do not incorporate explanations for seasonality. There is no obvious reason as to why the heuristics and biases referred to by Barberis et al.

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[1] They found 16 out of 40 markets to have negative momentum returns for January. Since the January effect is often associated with small firms, it is worth noting that their sample is biased towards larger stocks.

(1998) and Daniel et al. (1998) should behave differently during the month of January. Similarly, there is no reason why the speed of dissemination of news should be any different during January.

In contrast, the model developed by Grinblatt and Han (2004) is premised on heuristics that are thought to be influenced by tax-loss selling, thereby giving rise to an end of tax-year price effect. They premise the model on mental accounting and prospect theory which gives rise to the well-known disposition effect (Shefrin and Statman 1985). Based on experimental evidence, investors are assumed to evaluate the stocks that they hold differently according to their performance relative to a reference point. Grinblatt and Han assume the reference point is the price at which they were acquired, although alternative reference points have been identified in the literature.[2] Prospect theory then influences the investor's attitude to each mental account. Investors are risk averse with regards to stocks that have increased in value relative to the respective reference point and risk seeking for stocks that have declined.

This gives rise to the following demand function

$$D_t = 1 + b_t(F_t - P_t) + \lambda_t(R_t - P_t)$$

where P_t is the price of the stock, F_t is the fundamental value, R_t is the reference price, b_t is the slope coefficient for the rational demand function and λ_t is a positive coefficient that measures the importance of the capital gain for influencing the level of demand. For rational investors, λ_t is zero and the demand for a stock depends solely on the price relative to the fair value. For investors subject to prospect theory and mental accounting, demand is higher for stocks that have decreased in value but lower for stocks that have increased in value. With limits to arbitrage and heterogeneous investors, Grinblatt and Han show that the underreaction of "irrational" investors gives rise to a momentum effect.

The incorporation of a capital gain element in the demand variable enables the model to explain end-of-year seasonality. Grinblatt and Han argue that towards the end of the tax year investors who have experienced an overall capital gain have an incentive to sell stocks that have declined in value in order to off-set against the capital gains. This counters the disposition effect for loser stocks, and can be represented in the model by a λ_t that declines towards the end of the year before returning to a positive value at the start of the new tax year. This gives rise to two predictions: momentum returns increase towards the end of the tax year as selling pressure for loser stocks pushes their price towards the fundamental value. And momentum is low, or even negative, at the start of the new year as disposition trading returns and the demand for loser stock is accordingly increased.

[2] George and Hwang (2004) use the 52 week high as the reference point.

Data and Methodology

Data is from the London Share Price Database (LSPD) tape of returns of UK companies from January 1955 to December 2003. This tape consists of all companies quotes on the London Stock Exchange since 1975. For the period before 1975 the file is made up of a number of different samples. As well as a random sample of 33% of the companies quoted on the Exchange between 1955 and 1974, there are 33% of new issues in each year 1955-1974. There are a total of 1571 securities in the sample starting in January 1955, and as securities enter and leave the Exchange over the next more than 40 years, there are 7596 securities in total over the entire sample period.

The test for the profitability of momentum trading strategies in this paper follows the methodology used by De Bondt and Thaler (1985, 1987) and Jegadeesh and Titman (1993). These papers assess the profitability of $J \times K$ trading strategies, where securities are assigned to portfolios according to a ranking in period t based on the previous J month's performance. In month t, we construct a winner-loser portfolio, where an investor takes a short position in the loser portfolio, which consists of stocks in the bottom decile of past performers according to accumulated returns during the past J months, and a long position in the winner portfolio, which consists of the top decile of performers during the past J month, and then holding the winner-loser portfolio for K months.

The reported results are based on overlapping portfolios. In any given month t, the momentum strategy holds a series of portfolios that are selected in the current month as well as in the previous $K-1$ months. The strategy closes out the position initiated in month $t-K$. Hence, under this trading strategy we revise the weights on $\frac{1}{K}$ of the securities in the entire portfolio in any given month and carry over the rest from the previous month.

If disposition trading in conjunction with tax-loss selling is the primary cause of seasonal momentum we would expect to find that selling pressure for loser stocks at the end of the tax year results in increased momentum profits prior to the end of the tax year followed by very low or even negative momentum returns during the first month of the new tax year. The UK has an unusual tax regime in so far as while the corporate sector generally has a conventional January – December tax year, the individual sector's tax year runs from April 6th to April 5th. We would therefore expect to find high momentum returns during December and March, followed by low or negative momentum returns during January and April. If we further assume that the individual sector is more prone to disposition trading than the corporate sector, we would expect the March-April seasonality to be more pronounced than the December-January effect.

Changes to the tax regime have caused tax-loss selling to vary across time. Chen, Jack and Wood (2007) identify the key changes to the UK tax regimes. They note that CGT did not exist prior to 1966, so we would not expect a seasonal component for the sub-sample 1955-1965. From 1966 the introduction of CGT provided an incentive for tax-loss selling, but the opportunities for off-setting tax were to some extent limited by restrictive pooling arrangements. These pooling requirements were lifted from 1983, giving rise to a tax-regime with increased opportunities for tax-loss selling. Finally, in 1998 as part of a general clampdown on tax avoidance and with a view to increase incentives for long-term investment, the opportunities for tax-loss selling were thus reduced considerably by the need to identify shares in a specific order to match against disposals to create gains/losses.[3]

In summary, Chen et al. identified four tax regimes with clear differences in the opportunity for tax-loss selling.

Regime 1: 1955-1965. Very limited tax-loss selling in the absence of CGT.

Regime 2: 1966-1982. The introduction of CGT and corporation tax with restrictive pooling open up opportunities for tax-loss selling.

Regime 3: 1983-1997. The temporary lifting of pooling followed by the implementation of a more generous pooling regime further facilitates tax-loss selling.

Regime 4: 1998-2003. The clamp down on tax-loss selling and introduction of incentives for longer term investment creates a climate that is less conducive for tax-loss selling.

Empirical Results

Results for the conventional momentum strategy are reported in table 1. The results in Panel B skip one month between the formation and holding periods in order to avoid a microstructure effect. The magnitude of the momentum returns are comparable to those reported for US studies, with the J=K=6 strategy producing an average monthly return of 1.1% in Panel A and 1.4% in Panel B.

Table 1 around here
Table 2 around here
Figure 1 around here

Hon and Tonks (2003) argue that momentum is not a general feature in the UK. In Figure 1 we report a 12 month moving average of momentum returns while in Table 2 we present results for each of our sub-samples. The results are consistent with Hon

[3] Other disincentives were introduced, including a 30 day rule which the chargeable gain or loss for a share that is bought within 30 days of selling is based on the difference between the selling price less the repurchase price.

and Tonks, with modest momentum returns during the first two sub-samples but much higher returns during the latter two.

In table 3 we report average monthly returns of zero-cost momentum strategies with J month formation period which varying from 3 months to 12 months and K month holding periods ranging from 3 month to 36 months. In Panel B we report the corresponding results with a month time lag between the formation period and the execution of the momentum strategy. In this section we test the possible seasonal effects in January. If the tax-loss selling is the explanatory factor of the January reversal of momentum strategy in US market, we would expect an April effect in UK market, as the tax year is at 5th April in UK instead of 1st January.

Table 3 around here
Figure 2 around here

Both Panels indicate that momentum returns during both January and April are consistently negative, while those for other months are for the most part positive. The main exceptions are for strategies based on 3-month formation periods. For ease of presentation, in Figure 2 we present average momentum returns for strategies based on 6-month formation periods. This clearly indicates that the lowest returns are obtained during January and April, while the highest returns are seen in March. Taken together, this supports the tax-loss selling prediction for the individual sector, with selling pressure for loser stocks causing high momentum returns during March and low returns during April. But the results for the corporate sector are mixed in that the low January momentum returns are not preceded by high returns at the end of the year.

Table 4 reports results for winner and loser portfolios, alongside the momentum portfolios. These provide further support for tax-loss selling by individuals with the high momentum returns for March and low returns for April being a consequence of loser portfolios performing poorly during March before bouncing back in April. The high momentum returns witnessed during January is also a result of high returns for loser portfolios, but these are not preceded by high loser returns during December.

Table 4 around here
Table 5 around here

In Table 5 we present data for the four sub-periods. This provides further support for the tax-loss selling hypothesis by showing that the negative March returns and April bounceback for loser stocks began after the introduction of CGT in 1966. The differences between the three post 1965 regimes suggest that changes to the tax regimes did not have a large impact on the seasonality of momentum returns. When we compare regime 2 and regime there is little difference between the relative performances of March and April returns. While the March-April seasonality appears

to be strongest for regime 4, despite this being a time when the ability to tax-loss sell was relatively low. It is worth noting that regime 4 is a very short period that includes a very strong bear market that may explain these results.

Conclusion

In this paper we explore the seasonality of UK momentum returns. We find evidence of very high momentum returns during March followed by negative returns during April. This seasonality is driven by substantial swings in performance for the Loser portfolio, with loser stocks performing very poorly during March before bouncing back in April. This pattern is what we would expect to result from tax-loss selling by individual investors and as such supports the Grinblatt and Han's (2004) explanation for momentum that is based on disposition trading.

Poor January momentum returns are not so easily explained. Although these are also a consequence of unusually high returns for loser stocks, they are not preceded with evidence of tax-loss selling during the preceding month.

Figure 1

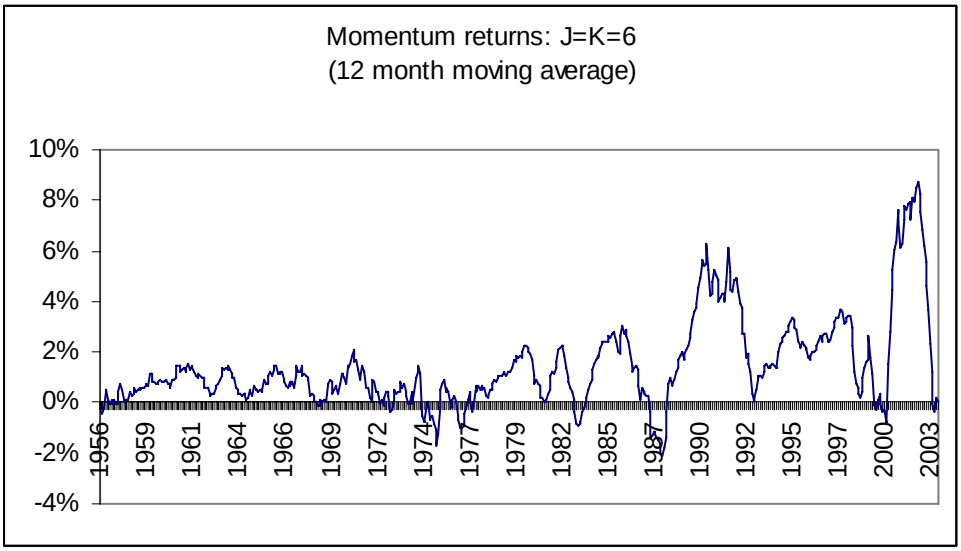
Momentum returns: J=K=6
(12 month moving average)
10%
8%
6%
4%
2%
0%
-2%
-4%
1956
1959
1961
1964
1966
1969
1972
1974
1977
1979
1982
1985
1987
1990
1992
1995
1997
2000
2003

Figure 2a: Monthly momentum returns
6 month formation, K month holding period (no lag)

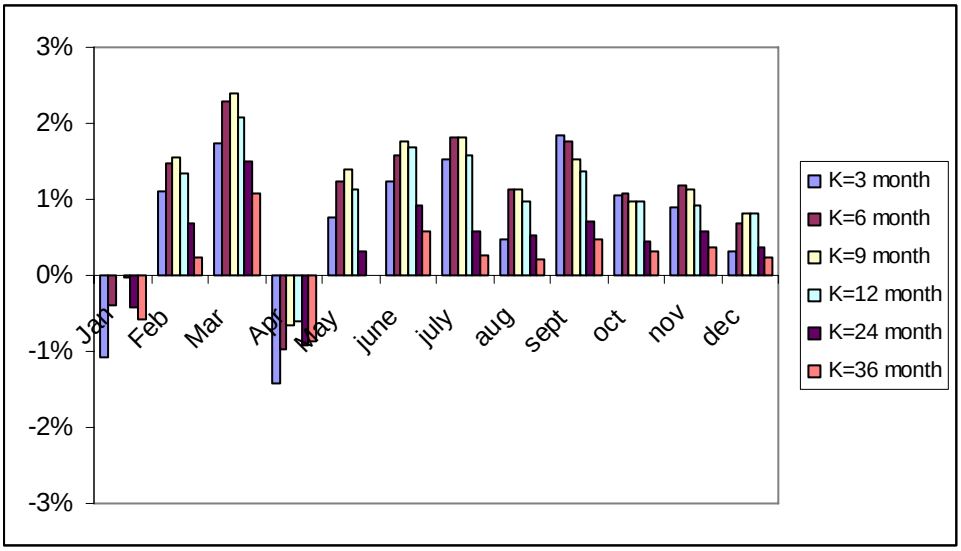

Figure 2b: Monthly momentum returns
6 month formation, K month holding period
(lag between formation and holding period)

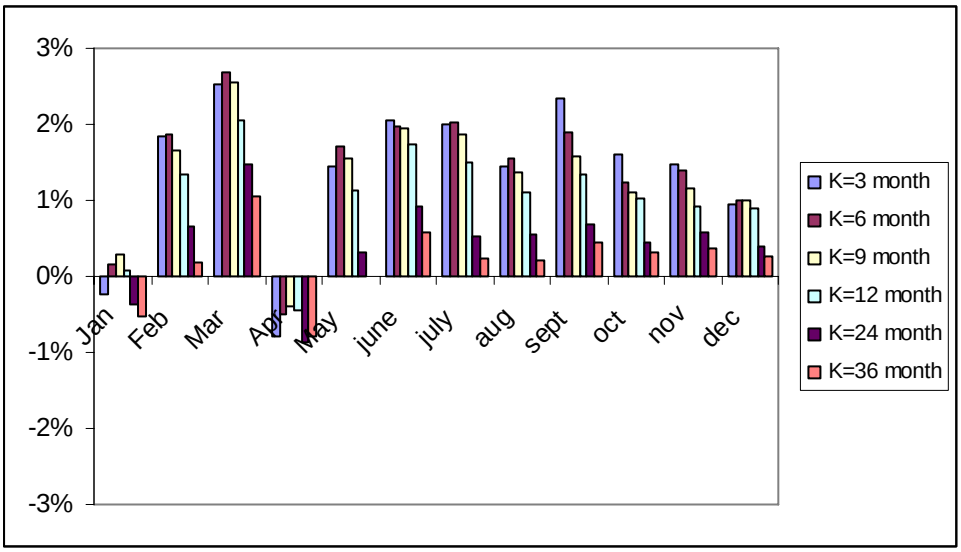

Table1A

Monthly returns on overlapping portolio strategies by time horizon (January 1955 to December 2003)

J-month past returns	*K*-month holding period					
	3	6	9	12	24	36
3	-0.0007*	0.0057*	0.0069*	0.0077*	0.0037	0.0019
6	0.0068*	0.0107*	0.0117*	0.0103*	0.0045	0.0019
9	0.0099*	0.0132*	0.0120*	0.0096*	0.0035	0.0012
12	0.0120*	0.0128*	0.0110*	0.0091*	0.0027	0.0006

Table1B

Monthly returns on overlapping portolio strategies by time horizon (January 1955 to December 2003)(skip one month after formation month)

J-month past returns	*K*-month holding period					
	3	6	9	12	24	36
3	0.0099*	0.0104*	0.0105*	0.0094*	0.0043	0.0023
6	0.0138*	0.0142*	0.0133*	0.0107*	0.0044	0.0019
9	0.0157*	0.0151*	0.0123*	0.0093*	0.0031	0.0010
12	0.0162*	0.0137*	0.0112*	0.0088*	0.0023	0.0004

* significant at the 99% level

^ significant at the 95% level

Table 2: Monthly returns on overlapping portolio strategies sub-samples
(skip one month after formation month)

	J-month formation	*K*-month holding period					
		3	6	9	12	24	36
1955-1965	3	-0.0109*	-0.0030^	0.0001	0.0020	0.0011	0.0007
	6	0.0035^	0.0064*	0.0074*	0.0057*	0.0027^	0.0014
	9	0.0070*	0.009*	0.0074*	0.0060*	0.0025^	0.0014
	12	0.0084*	0.0077*	0.0067*	0.0057*	0.0018	0.0007
1966-1982	3	-0.0088*	-0.0011	0.0009	0.0028	0.0008	-0.0003
	6	0.0052^	0.0070*	0.0072*	0.0061*	0.0014	-0.0005
	9	0.0083*	0.0087*	0.0076*	0.0057*	0.0006	-0.0013
	12	0.0101*	0.0098*	0.0091*	0.0077*	0.0009	-0.0012
1983-1997	3	0.0087*	0.0121*	0.0125*	0.0123*	0.0067*	0.0046
	6	0.0213*	0.0202*	0.0184*	0.0149*	0.0078*	0.0050
	9	0.0233*	0.0214*	0.0179*	0.0137*	0.0070*	0.0045
	12	0.0230*	0.0191*	0.0151*	0.0120*	0.0061*	0.0038
1997-2003	3	0.0169*	0.0240*	0.0214*	0.0194*	0.0079*	0.0028
	6	0.0368*	0.0323*	0.0274*	0.0207*	0.0070*	0.0017
	9	0.0324*	0.0271*	0.0196*	0.0134*	0.0014	-0.0013
	12	0.0290*	0.0210*	0.0140*	0.0086*	-0.0026^	-0.0041

* significant at the 99% level

^ significant at the 95% level

Table3A

Calendar seasonality of monthly returns on overlapping portfolio strategies by time horizon (January 1955 to December 2003)

J-month past returns		*K*-month holding period					
		3	6	9	12	24	36
3	Jan	-0.0141*	-0.0060*	-0.0028	-0.0007*	-0.0033^	-0.0037^
	Feb	0.0045*	0.0087*	0.01098*	0.0114*	0.0061*	0.0031
	Mar	0.0042*	0.0123*	0.0150*	0.0161*	0.0112*	0.0082*
	Apr	-0.0183*	-0.0108*	-0.0083*	-0.0051*	-0.0061*	-0.0053*
	May	-0.0026	0.0055*	0.0071*	0.0082*	0.0022	0.0000
	June	0.0038^	0.0107*	0.0108*	0.0128*	0.0071*	0.0039*
	July	0.0084*	0.0124*	0.0130*	0.0130*	0.0060*	0.0031^
	Aug	-0.0055*	0.0024	0.0055*	0.0057*	0.0033^	0.0016
	Sept	0.0098*	0.0148*	0.0118*	0.0110*	0.0062*	0.0038^
	Oct	0.0039^	0.0084*	0.0072*	0.0072*	0.0042*	0.0029
	Nov	-0.0016	0.0059*	0.0074*	0.0068*	0.0042*	0.0026
	Dec	-0.0011	0.0040*	0.0054*	0.0065*	0.0032^	0.0022
6	Jan	-0.0109*	-0.0039*	0.0000	-0.0003	-0.0042*	-0.0058*
	Feb	0.0112*	0.0148	0.0156*	0.0135*	0.0069*	0.0023
	Mar	0.0173*	0.0228	0.0240*	0.0207*	0.0150*	0.0109*
	Apr	-0.0143*	-0.0098*	-0.0067*	-0.0062*	-0.0092*	-0.0087*
	May	0.0076*	0.0124*	0.0139*	0.0114*	0.0032^	-0.0001
	June	0.0123*	0.0159*	0.0175*	0.0168*	0.0092*	0.0058*
	July	0.0151*	0.0182*	0.0182*	0.0157*	0.0059*	0.0027
	Aug	0.0049*	0.0112*	0.0114*	0.0097*	0.0053*	0.0020
	Sept	0.0184*	0.0177*	0.0153*	0.0137*	0.0071*	0.0047*
	Oct	0.0104*	0.0107*	0.0097*	0.0096*	0.0044*	0.0031^
	Nov	0.0090*	0.0119*	0.0112*	0.0091*	0.0059*	0.0036^
	Dec	0.0030	0.0068*	0.0081*	0.0081*	0.0038^	0.0025
9	Jan	-0.0085*	-0.0020	-0.0013	-0.0031^	-0.0067*	-0.0079*
	Feb	0.0163*	0.0181*	0.0156*	0.0122	0.0059*	0.0012
	Mar	0.0237*	0.0272*	0.0250*	0.0216*	0.0155	0.0117*
	Apr	-0.0105*	-0.0049*	-0.0048*	-0.0050*	-0.0103	-0.0094*
	May	0.0102*	0.0161*	0.0137*	0.0102*	0.0018	-0.0014
	June	0.0157*	0.0205*	0.0188*	0.0162*	0.0079*	0.0049*
	July	0.0178*	0.0196*	0.0179*	0.0137*	0.0044*	0.0023
	Aug	0.0122*	0.0145*	0.0136*	0.0109*	0.0055*	0.0016
	Sept	0.0191*	0.0186*	0.0156*	0.0125*	0.0063*	0.0042*
	Oct	0.0102*	0.0110*	0.0106*	0.0089*	0.0036^	0.0025
	Nov	0.0100*	0.0113*	0.0098*	0.0083*	0.0047*	0.0030
	Dec	0.0069*	0.0098*	0.0100*	0.0089*	0.0034^	0.0022
12	Jan	-0.0021	0.0000	-0.0009	-0.0016	-0.0080*	-0.0087*
	Feb	0.0203*	0.0189*	0.0162*	0.0135*	0.0054*	0.0004
	Mar	0.0268*	0.0271*	0.0253*	0.0231*	0.0165	0.0130
	Apr	-0.0100*	-0.0072*	-0.0066*	-0.0069*	-0.0121	-0.0109*
	May	0.0137*	0.0139*	0.0117*	0.0090*	0.0008	-0.0021
	June	0.0213*	0.0214*	0.0182*	0.0159*	0.0076*	0.0048*
	July	0.0197*	0.0192*	0.0160*	0.0118*	0.0028	0.0008
	Aug	0.0126*	0.0141*	0.0135*	0.0114*	0.0053*	0.0016
	Sept	0.0177*	0.0172*	0.0132*	0.0109*	0.0054*	0.0034
	Oct	0.0094*	0.0110*	0.0086*	0.0069*	0.0026	0.0017
	Nov	0.0082*	0.0093*	0.0079*	0.0074*	0.0037^	0.0022
	Dec	0.0079*	0.0095*	0.0091	0.0077*	0.0024	0.0008

Table3B

Calendar seasonality of monthly returns on overlapping portfolio strategies by time horizon (January 1955 to December 2003)(skip one month after formation period)

J-month past returns		*K*-month holding period					
		3	6	9	12	24	36
3	Jan	-0.0019	0.0001	0.0018	0.0016	-0.0022	-0.0029
	Feb	0.0147*	0.0140*	0.0149*	0.0128*	0.0065*	0.0032^
	Mar	0.0199*	0.0184*	0.0206*	0.0178*	0.0119*	0.0087*
	Apr	-0.0081*	-0.0059*	-0.0037*	-0.0029	-0.0055*	-0.0045*
	May	0.0055*	0.0100*	0.0105*	0.0090*	0.0029	0.0004
	June	0.0140*	0.0157*	0.0142*	0.0143*	0.0078*	0.0043*
	July	0.0166*	0.0159*	0.0150*	0.0144*	0.0064*	0.0034^
	Aug	0.0060*	0.0081*	0.0093*	0.0078*	0.0041*	0.0021
	Sept	0.0227*	0.0185*	0.0146*	0.0125*	0.0067*	0.0042*
	Oct	0.0131*	0.0117*	0.0096*	0.0089*	0.0049*	0.0034^
	Nov	0.0087*	0.0108*	0.0100*	0.0077*	0.0049*	0.0030^
	Dec	0.0086*	0.0087*	0.0090*	0.0083*	0.0039^	0.0027
6	Jan	-0.0023	0.0015	0.0029	0.0007	-0.0037^	-0.0054*
	Feb	0.0184*	0.0186*	0.0165*	0.0135*	0.0067*	0.0019
	Mar	0.0252*	0.0269*	0.0256*	0.0206*	0.0148*	0.0106*
	Apr	-0.0079*	-0.0050*	-0.0038*	-0.0045*	-0.0086*	-0.0079*
	May	0.0146*	0.0170*	0.0156*	0.0113*	0.0031	-0.0001
	June	0.0206*	0.0198*	0.0195*	0.0175*	0.0091*	0.0057*
	July	0.0200*	0.0201*	0.0188*	0.0150*	0.0051*	0.0024
	Aug	0.0145*	0.0154*	0.0136**	0.0109*	0.0055*	0.0020
	Sept	0.0234*	0.0189*	0.0159*	0.0134*	0.0068*	0.0044*
	Oct	0.0160*	0.0125*	0.0112*	0.0102*	0.0044*	0.0031
	Nov	0.0148*	0.0139*	0.0116*	0.0093*	0.0058*	0.0036^
	Dec	0.0094*	0.0100*	0.0100*	0.0089*	0.0039^	0.0026
9	Jan	-0.0001	0.0016	0.0000	-0.0024	-0.0066*	-0.0077*
	Feb	0.0210*	0.0188*	0.0152*	0.0112*	0.0051*	0.0005
	Mar	0.0321*	0.0296*	0.0252*	0.0212*	0.0151*	0.0113*
	Apr	-0.0032	-0.0018	-0.0027	-0.0043*	-0.0098*	-0.0089*
	May	0.0173*	0.0177*	0.0135*	0.0093*	0.0012	-0.0017
	June	0.0211*	0.0223*	0.0190*	0.0156*	0.0073*	0.0045*
	July	0.0213*	0.0206*	0.0170*	0.0126*	0.0035^	0.0018
	Aug	0.0185*	0.0168*	0.0143*	0.0107*	0.0051*	0.0014
	Sept	0.0233*	0.0187*	0.0148*	0.0116*	0.0055*	0.0038*
	Oct	0.0135*	0.0129*	0.0112*	0.0087*	0.0035^	0.0023
	Nov	0.0141*	0.0118*	0.0099*	0.0083*	0.0043*	0.0029
	Dec	0.0125*	0.0118*	0.0111*	0.0090*	0.0033^	0.0021
12	Jan	0.0036	0.0018	0.0004	-0.0008*	-0.0082*	-0.0084*
	Feb	0.0233*	0.0192*	0.0155*	0.0125*	0.0046*	-0.0003
	Mar	0.0322*	0.0277*	0.0256*	0.0227*	0.0159*	0.0126*
	Apr	-0.0054*	-0.0045*	-0.0047*	-0.0064*	-0.0118*	-0.0103*
	May	0.0160*	0.0144*	0.0112*	0.0081*	0.0002	-0.0025
	June	0.0259*	0.0220*	0.0179*	0.0152*	0.0070*	0.0045*
	July	0.0226*	0.0192*	0.0149*	0.0107*	0.0021	0.0004
	Aug	0.0175*	0.0160*	0.0139*	0.0114*	0.0048*	0.0015
	Sept	0.0220*	0.0166*	0.0128*	0.0103*	0.0048*	0.0030*
	Oct	0.0132*	0.0120*	0.0083*	0.0068*	0.0026	0.0016
	Nov	0.0115*	0.0102*	0.0086*	0.0074*	0.0034^	0.0021
	Dec	0.0109*	0.0108*	0.0093*	0.0075*	0.0022	0.0006

Table 4: Winner, Loser and Momentum Portfolios

		3 month winner	3 month loser	3 month momentum	6 month winner	6 month loser	6 month momentum	9 month winner	9 month loser	9 month momentum	12 month winner	12 month loser	12 month momentum	24 month winner	24 month loser	24 month momentum
3 month	Jan	0.0268	0.0409	-0.0141	0.0309	0.0369	-0.0060	0.0327	0.0355	-0.0028	0.0351	0.0358	-0.0007	0.0337	0.0370	-0.0033
	Feb	0.0162	0.0118	0.0045	0.0183	0.0096	0.0087	0.0198	0.0088	0.0109	0.0212	0.0098	0.0114	0.0186	0.0125	0.0061
	Mar	-0.0014	-0.0056	0.0042	0.0025	-0.0098	0.0123	0.0046	-0.0104	0.0151	0.0072	-0.0089	0.0161	0.0063	-0.0050	0.0112
	Apr	0.0205	0.0388	-0.0183	0.0233	0.0341	-0.0108	0.0242	0.0325	-0.0083	0.0263	0.0314	-0.0051	0.0263	0.0324	-0.0061
	May	0.0001	0.0027	-0.0026	0.0044	-0.0012	0.0055	0.0059	-0.0013	0.0071	0.0069	-0.0013	0.0082	0.0056	0.0033	0.0022
	June	-0.0088	-0.0125	0.0038	-0.0060	-0.0168	0.0107	-0.0064	-0.0172	0.0108	-0.0052	-0.0180	0.0128	-0.0078	-0.0149	0.0071
	July	-0.0015	-0.0098	0.0084	-0.0007	-0.0131	0.0125	-0.0005	-0.0135	0.0130	0.0001	-0.0129	0.0130	-0.0025	-0.0085	0.0060
	Aug	0.0029	0.0084	-0.0055	0.0070	0.0046	0.0024	0.0082	0.0027	0.0055	0.0085	0.0028	0.0057	0.0071	0.0039	0.0033
	Sept	-0.0090	-0.0188	0.0098	-0.0071	-0.0218	0.0148	-0.0089	-0.0207	0.0118	-0.0094	-0.0204	0.0110	-0.0111	-0.0173	0.0062
	Oct	0.0015	-0.0024	0.0039	0.0028	-0.0056	0.0084	0.0024	-0.0048	0.0072	0.0028	-0.0044	0.0072	0.0005	-0.0037	0.0042
	Nov	-0.0007	0.0010	-0.0016	0.0017	-0.0042	0.0059	0.0026	-0.0048	0.0074	0.0026	-0.0042	0.0068	0.0021	-0.0021	0.0042
	Dec	0.0129	0.0140	-0.0011	0.0148	0.0107	0.0040	0.0144	0.0090	0.0054	0.0153	0.0088	0.0065	0.0134	0.0102	0.0032
6 month	Jan	0.0305	0.0414	-0.0109	0.0338	0.0377	-0.0039	0.0360	0.0360	0.0000	0.0358	0.0361	-0.0003	0.0334	0.0377	-0.0043
	Feb	0.0218	0.0107	0.0112	0.0227	0.0080	0.0148	0.0238	0.0079	0.0160	0.0226	0.0088	0.0137	0.0190	0.0121	0.0069
	Mar	0.0054	-0.0108	0.0161	0.0081	-0.0139	0.0220	0.0106	-0.0135	0.0240	0.0100	-0.0107	0.0207	0.0083	-0.0067	0.0150
	Apr	0.0229	0.0378	-0.0149	0.0233	0.0338	-0.0105	0.0256	0.0328	-0.0072	0.0263	0.0325	-0.0062	0.0246	0.0338	-0.0092
	May	0.0064	-0.0012	0.0076	0.0086	-0.0039	0.0124	0.0098	-0.0042	0.0140	0.0091	-0.0024	0.0114	0.0053	0.0021	0.0032
	June	-0.0049	-0.0169	0.0120	-0.0039	-0.0200	0.0161	-0.0026	-0.0208	0.0182	-0.0033	-0.0202	0.0169	-0.0069	-0.0161	0.0092
	July	0.0020	-0.0125	0.0146	0.0026	-0.0152	0.0178	0.0029	-0.0152	0.0181	0.0020	-0.0139	0.0158	-0.0024	-0.0083	0.0059
	Aug	0.0088	0.0038	0.0050	0.0115	0.0000	0.0114	0.0116	-0.0001	0.0117	0.0110	0.0011	0.0099	0.0082	0.0030	0.0052
	Sept	-0.0048	-0.0235	0.0188	-0.0057	-0.0238	0.0181	-0.0070	-0.0226	0.0156	-0.0077	-0.0217	0.0140	-0.0109	-0.0179	0.0070
	Oct	0.0052	-0.0052	0.0104	0.0049	-0.0061	0.0109	0.0045	-0.0054	0.0099	0.0045	-0.0054	0.0098	0.0009	-0.0039	0.0048
	Nov	0.0050	-0.0040	0.0090	0.0062	-0.0060	0.0122	0.0061	-0.0054	0.0115	0.0049	-0.0044	0.0093	0.0036	-0.0023	0.0059
	Dec	0.0161	0.0131	0.0030	0.0163	0.0094	0.0069	0.0170	0.0087	0.0083	0.0169	0.0086	0.0083	0.0144	0.0105	0.0039
9 month	Jan	0.0328	0.0412	-0.0084	0.0359	0.0378	-0.0020	0.0355	0.0368	-0.0013	0.0345	0.0376	-0.0031	0.0321	0.0388	-0.0067
	Feb	0.0245	0.0088	0.0157	0.0253	0.0072	0.0181	0.0234	0.0078	0.0156	0.0219	0.0097	0.0122	0.0182	0.0123	0.0059
	Mar	0.0094	-0.0132	0.0226	0.0125	-0.0146	0.0272	0.0124	-0.0126	0.0250	0.0109	-0.0107	0.0216	0.0090	-0.0066	0.0155
	Apr	0.0244	0.0356	-0.0112	0.0265	0.0319	-0.0054	0.0274	0.0322	-0.0048	0.0273	0.0324	-0.0050	0.0243	0.0346	-0.0103
	May	0.0084	-0.0021	0.0105	0.0110	-0.0051	0.0161	0.0101	-0.0035	0.0137	0.0084	-0.0019	0.0102	0.0046	0.0028	0.0018
	June	-0.0037	-0.0196	0.0159	-0.0014	-0.0227	0.0214	-0.0027	-0.0214	0.0188	-0.0038	-0.0200	0.0162	-0.0078	-0.0157	0.0079
	July	0.0025	-0.0148	0.0173	0.0035	-0.0160	0.0196	0.0028	-0.0151	0.0180	0.0007	-0.0131	0.0137	-0.0034	-0.0078	0.0044
	Aug	0.0117	0.0003	0.0114	0.0129	-0.0010	0.0139	0.0124	-0.0008	0.0131	0.0110	0.0001	0.0109	0.0084	0.0029	0.0055
	Sept	-0.0052	-0.0235	0.0183	-0.0053	-0.0234	0.0180	-0.0070	-0.0222	0.0153	-0.0085	-0.0211	0.0125	-0.0108	-0.0171	0.0063

	Oct	0.0063	-0.0037	0.0100	0.0055	-0.0049	0.0105	0.0052	-0.0051	0.0103	0.0042	-0.0045	0.0087	0.0005	-0.0035	0.0040
	Nov	0.0063	-0.0038	0.0100	0.0069	-0.0044	0.0113	0.0061	-0.0037	0.0098	0.0050	-0.0034	0.0083	0.0035	-0.0012	0.0047
	Dec	0.0164	0.0095	0.0069	0.0180	0.0082	0.0098	0.0179	0.0079	0.0100	0.0172	0.0084	0.0089	0.0141	0.0108	0.0034
12 month	Jan	0.0372	0.0393	-0.0021	0.0380	0.0380	0.0000	0.0372	0.0381	-0.0009	0.0365	0.0381	-0.0016	0.0330	0.0410	-0.0080
	Feb	0.0283	0.0080	0.0203	0.0264	0.0075	0.0189	0.0249	0.0086	0.0162	0.0236	0.0101	0.0135	0.0185	0.0131	0.0054
	Mar	0.0132	-0.0136	0.0268	0.0138	-0.0133	0.0271	0.0137	-0.0117	0.0254	0.0128	-0.0104	0.0232	0.0100	-0.0064	0.0165
	Apr	0.0268	0.0373	-0.0104	0.0275	0.0347	-0.0072	0.0276	0.0342	-0.0066	0.0273	0.0341	-0.0069	0.0239	0.0359	-0.0121
	May	0.0104	-0.0034	0.0138	0.0102	-0.0037	0.0139	0.0090	-0.0027	0.0117	0.0076	-0.0014	0.0090	0.0044	0.0036	0.0008
	June	-0.0002	-0.0223	0.0220	-0.0013	-0.0227	0.0214	-0.0028	-0.0210	0.0182	-0.0038	-0.0196	0.0159	-0.0076	-0.0152	0.0076
	July	0.0044	-0.0156	0.0199	0.0038	-0.0157	0.0195	0.0014	-0.0146	0.0160	-0.0007	-0.0125	0.0118	-0.0048	-0.0076	0.0028
	Aug	0.0133	0.0013	0.0120	0.0129	-0.0008	0.0137	0.0122	-0.0013	0.0135	0.0112	-0.0002	0.0114	0.0089	0.0036	0.0053
	Sept	-0.0042	-0.0213	0.0171	-0.0049	-0.0217	0.0168	-0.0071	-0.0204	0.0132	-0.0084	-0.0193	0.0109	-0.0102	-0.0156	0.0054
	Oct	0.0071	-0.0020	0.0091	0.0068	-0.0040	0.0107	0.0052	-0.0033	0.0085	0.0033	-0.0036	0.0069	0.0021	-0.0005	0.0026
	Nov	0.0070	-0.0014	0.0084	0.0072	-0.0024	0.0096	0.0060	-0.0024	0.0084	0.0056	-0.0017	0.0074	0.0026	-0.0011	0.0037
	Dec	0.0185	0.0107	0.0078	0.0191	0.0097	0.0093	0.0183	0.0093	0.0089	0.0168	0.0091	0.0077	0.0149	0.0125	0.0024

Table5: Winner, Loser and Momentum Portfolios by Tax Regime

			3monthwinner	3monthloser	3month momem	6monthwinner	6month loser	6month momem	9monthwinner	9month loser	9month momen	12month winner	12month loser	12month momen	24month winner	24month loser	24month momem
Jan	3month	55-65JAN	0.0054	0.0274	-0.0220*	0.0095	0.0223	-0.0128*	0.0116	0.0207	-0.0091*	0.0156	0.0235	-0.0079*	0.0145	0.0168	-0.0023
		66-82JAN	0.0377	0.0662	-0.0285*	0.0411	0.0617	-0.0205*	0.0439	0.0600	-0.0162*	0.0461	0.0585	-0.0124*	0.0459	0.0572	-0.0113*
		83-97JAN	0.0344	0.0373	-0.0029	0.0356	0.0339	0.0017	0.0366	0.0329	0.0037*	0.0375	0.0318	0.0057*	0.0365	0.0347	0.0019
		98-03JAN	0.0031	-0.0213	0.0244*	0.0150	-0.0234	0.0384*	0.0143	-0.0233	0.0376*	0.0144	-0.0199	0.0344^	0.0053	-0.0068	0.0121*
	6 month	55-65JAN	0.0069	0.0262	-0.0193*	0.0107	0.0222	-0.0115*	0.0141	0.0240	-0.0099*	0.0170	0.0257	-0.0087*	0.0165	0.0172	-0.0007
		66-82JAN	0.0374	0.0702	-0.0327*	0.0417	0.0642	-0.0226*	0.0440	0.0602	-0.0162*	0.0446	0.0595	-0.0149*	0.0439	0.0587	-0.0148*
		83-97JAN	0.0381	0.0359	0.0022	0.0392	0.0339	0.0053*	0.0408	0.0320	0.0088*	0.0399	0.0323	0.0076*	0.0377	0.0350	0.0027
		98-03JAN	0.0222	-0.0244	0.0466*	0.0255	-0.0251	0.0506*	0.0223	-0.0254	0.0477*	0.0188	-0.0212	0.0400*	0.0065	-0.0058	0.0123*
	9 month	55-65JAN	0.0079	0.0278	-0.0199*	0.0131	0.0266	-0.0135*	0.0140	0.0243	-0.0103*	0.0165	0.0258	-0.0093*	0.0144	0.0152	-0.0008
		66-82JAN	0.0377	0.0668	-0.0291*	0.0411	0.0612	-0.0201*	0.0421	0.0599	-0.0178*	0.0421	0.0603	-0.0182*	0.0418	0.0594	-0.0175*
		83-97JAN	0.0415	0.0370	0.0045^	0.0430	0.0332	0.0098*	0.0425	0.0325	0.0100*	0.0412	0.0341	0.0071*	0.0378	0.0359	0.0019
		98-03JAN	0.0294	-0.0208	0.0503*	0.0262	-0.0212	0.0474*	0.0193	-0.0192	0.0385*	0.0141	-0.0161	0.0303*	0.0031	-0.0012	0.0043*
	12 month	55-65JAN	0.0123	0.0302	-0.0179*	0.0146	0.0263	-0.0117*	0.0153	0.0245	-0.0092*	0.0161	0.0227	-0.0066*	0.0153	0.0149	0.0004
		66-82JAN	0.0459	0.0671	-0.0212*	0.0481	0.0659	-0.0178*	0.0487	0.0655	-0.0168*	0.0495	0.0652	-0.0157*	0.0473	0.0679	-0.0207*
		83-97JAN	0.0531	0.0372	0.0159*	0.0533	0.0362	0.0171*	0.0516	0.0363	0.0153*	0.0497	0.0371	0.0125*	0.0440	0.0413	0.0028
		98-03JAN	0.0165	-0.0186	0.0351*	0.0122	-0.0169	0.0292*	0.0079	-0.0135	0.0214*	0.0045	-0.0121	0.0165*	-0.0053	0.0020	-0.0073*
Dec	3month	55-65DEC	0.0163	0.0252	-0.0089*	0.0187	0.0210	-0.0023	0.0173	0.0177	-0.0004	0.0157	0.0160	-0.0003	0.0140	0.0148	-0.0008
		66-82DEC	0.0074	0.0225	-0.0151*	0.0087	0.0185	-0.0098*	0.0093	0.0177	-0.0084*	0.0117	0.0156	-0.0039*	0.0122	0.0149	-0.0028
		83-97DEC	0.0144	0.0097	0.0047^	0.0156	0.0078	0.0078*	0.0151	0.0061	0.0090*	0.0163	0.0063	0.0100*	0.0159	0.0101	0.0058*
		98-03DEC	0.0203	-0.0133	0.0336*	0.0237	-0.0161	0.0397*	0.0242	-0.0176	0.0418*	0.0224	-0.0135	0.0358*	0.0135	-0.0055	0.0190*
	6 month	55-65DEC	0.0203	0.0240	-0.0037^	0.0203	0.0195	0.0008	0.0201	0.0190	0.0011	0.0214	0.0209	0.0005	0.0171	0.0176	-0.0005
		66-82DEC	0.0069	0.0218	-0.0149*	0.0077	0.0193	-0.0117*	0.0101	0.0177	-0.0076*	0.0116	0.0150	-0.0035^	0.0123	0.0154	-0.0031^
		83-97DEC	0.0170	0.0103	0.0066*	0.0174	0.0071	0.0103*	0.0181	0.0058	0.0123*	0.0183	0.0067	0.0116*	0.0172	0.0104	0.0068*
		98-03DEC	0.0341	-0.0163	0.0504*	0.0330	-0.0223	0.0553*	0.0303	-0.0196	0.0499*	0.0267	-0.0150	0.0417*	0.0157	-0.0059	0.0216*
	9 month	55-65DEC	0.0193	0.0183	0.0009	0.0209	0.0173	0.0036^	0.0206	0.0167	0.0039*	0.0193	0.0165	0.0028	0.0145	0.0144	0.0002
		66-82DEC	0.0070	0.0222	-0.0151*	0.0102	0.0192	-0.0090*	0.0113	0.0164	-0.0051*	0.0122	0.0148	-0.0026	0.0117	0.0154	-0.0037*
		83-97DEC	0.0181	0.0079	0.0102*	0.0195	0.0048	0.0147*	0.0198	0.0050	0.0148*	0.0190	0.0071	0.0120*	0.0181	0.0111	0.0070*
		98-03DEC	0.0359	-0.0295	0.0654*	0.0339	-0.0221	0.0560*	0.0304	-0.0165	0.0470*	0.0264	-0.0131	0.0395*	0.0150	-0.0027	0.0178*
	12 month	55-65DEC	0.0188	0.0172	0.0016	0.0202	0.0170	0.0033^	0.0196	0.0168	0.0028	0.0155	0.0136	0.0020	0.0151	0.0171	-0.0020
		66-82DEC	0.0115	0.0186	-0.0072*	0.0123	0.0171	-0.0048*	0.0124	0.0157	-0.0033^	0.0121	0.0149	-0.0028	0.0124	0.0173	-0.0049*
		83-97DEC	0.0196	0.0014	0.0181*	0.0199	0.0015	0.0184*	0.0189	0.0019	0.0170	0.0183	0.0044	0.0139*	0.0160	0.0087	0.0073*
		98-03DEC	0.0374	-0.0115	0.0489*	0.0347	-0.0121	0.0468*	0.0310	-0.0114	0.0424*	0.0276	-0.0100	0.0376*	0.0159	-0.0018	0.0177*

Table5 continued

	3month	55-65APR	0.0263	0.0263	0.0000	0.0278	0.0207	0.0071*	0.0283	0.0208	0.0075*	0.0298	0.0206	0.0092*	0.0286	0.0212	0.0074*
		66-82APR	0.0273	0.0470	-0.0197*	0.0301	0.0429	-0.0128*	0.0307	0.0416	-0.0109*	0.0330	0.0401	-0.0070*	0.0321	0.0428	-0.0107*
		83-97APR	0.0236	0.0298	-0.0062*	0.0255	0.0271	-0.0016	0.0260	0.0270	-0.0010	0.0265	0.0272	-0.0007	0.0253	0.0293	-0.0040*
		98-03APR	-0.0153	0.0581	-0.0733*	-0.0066	0.0491	-0.0557*	-0.0032	0.0415	-0.0448*	0.0025	0.0367	-0.0342*	0.0100	0.0293	-0.0193*
	6 month	55-65APR	0.0297	0.0198	0.0098*	0.0303	0.0179	0.0124*	0.0354	0.0201	0.0153*	0.0367	0.0175	0.0192*	0.0305	0.0201	0.0104*
		66-82APR	0.0288	0.0488	-0.0200*	0.0286	0.0438	-0.0152*	0.0313	0.0426	-0.0113*	0.0320	0.0429	-0.0110*	0.0298	0.0455	-0.0157*
		83-97APR	0.0272	0.0257	0.0015	0.0269	0.0255	0.0014	0.0274	0.0265	0.0009	0.0270	0.0280	-0.0009	0.0248	0.0298	-0.0049*
		98-03APR	-0.0140	0.0674	-0.0814*	-0.0103	0.0546	-0.0649*	-0.0042	0.0466	-0.0508*	0.0004	0.0415	-0.0411*	0.0080	0.0338	-0.0258*
Apr	9 month	55-65APR	0.0320	0.0188	0.0132*	0.0338	0.0172	0.0167*	0.0356	0.0147	0.0209*	0.0379	0.0179	0.0200*	0.0272	0.0180	0.0092*
		66-82APR	0.0293	0.0481	-0.0188*	0.0318	0.0439	-0.0121*	0.0313	0.0444	-0.0131*	0.0313	0.0445	-0.0132*	0.0288	0.0479	-0.0191*
		83-97APR	0.0277	0.0265	0.0011	0.0276	0.0252	0.0024	0.0281	0.0274	0.0007	0.0271	0.0285	-0.0014	0.0241	0.0307	-0.0066*
		98-03APR	-0.0090	0.0530	-0.0620*	-0.0028	0.0418	-0.0445*	0.0024	0.0381	-0.0357*	0.0075	0.0345	-0.0271*	0.0094	0.0304	-0.0210*
	12 month	55-65APR	0.0340	0.0189	0.0151*	0.0358	0.0146	0.0212*	0.0349	0.0151	0.0198*	0.0339	0.0162	0.0178*	0.0274	0.0189	0.0085*
		66-82APR	0.0349	0.0559	-0.0211*	0.0354	0.0530	-0.0176*	0.0352	0.0523	-0.0172*	0.0347	0.0520	-0.0173*	0.0307	0.0546	-0.0238*
		83-97APR	0.0271	0.0216	0.0055*	0.0270	0.0217	0.0053*	0.0258	0.0235	0.0023	0.0244	0.0250	-0.0006	0.0208	0.0277	-0.0069*
		98-03APR	-0.0084	0.0589	-0.0672*	-0.0051	0.0507	-0.0559*	0.0006	0.0439	-0.0433*	0.0042	0.0394	-0.0352*	0.0080	0.0332	-0.0252*
	3month	55-65MAR	0.0050	0.0164	-0.0115*	0.0106	0.0101	0.0005	0.0123	0.0082	0.0041*	0.0184	0.0125	0.0059*	0.0181	0.0139	0.0042*
		66-82MAR	0.0013	0.0037	-0.0024	0.0059	-0.0022	0.0080*	0.0079	-0.0044	0.0123*	0.0094	-0.0046	0.0139*	0.0093	-0.0028	0.0121*
		83-97MAR	0.0133	-0.0020	0.0153*	0.0148	-0.0041	0.0189*	0.0160	-0.0049	0.0209*	0.0167	-0.0028	0.0195*	0.0151	0.0014	0.0137*
		98-03MAR	-0.0428	-0.0646	0.0218*	-0.0383	-0.0661	0.0278*	-0.0332	-0.0601	0.0269*	-0.0274	-0.0563	0.0289*	-0.0279	-0.0401	0.0122*
	6 month	55-65MAR	0.0130	0.0132	-0.0002	0.0158	0.0081	0.0077*	0.0212	0.0112	0.0100*	0.0236	0.0129	0.0107*	0.0220	0.0154	0.0066*
		66-82MAR	0.0076	-0.0009	0.0084*	0.0106	-0.0066	0.0172*	0.0126	-0.0088	0.0214*	0.0128	-0.0076	0.0204*	0.0118	-0.0056	0.0174*
		83-97MAR	0.0191	-0.0066	0.0256*	0.0207	-0.0083	0.0290*	0.0209	-0.0073	0.0282*	0.0199	-0.0045	0.0244*	0.0172	0.0003	0.0169*
		98-03MAR	-0.0338	-0.0759	0.0421*	-0.0296	-0.0727	0.0431*	-0.0233	-0.0661	0.0429*	-0.0255	-0.0557	0.0302*	-0.0255	-0.0411	0.0156*
Mar	9 month	55-65MAR	0.0131	0.0101	0.0030	0.0223	0.0108	0.0115*	0.0218	0.0109	0.0108*	0.0229	0.0121	0.0107*	0.0191	0.0127	0.0064*
		66-82MAR	0.0121	-0.0075	0.0196*	0.0146	-0.0116	0.0262*	0.0160	-0.0117	0.0277*	0.0156	-0.0111	0.0267*	0.0130	-0.0074	0.0204*
		83-97MAR	0.0232	-0.0056	0.0288*	0.0237	-0.0073	0.0310*	0.0225	-0.0060	0.0285*	0.0209	-0.0038	0.0248*	0.0177	0.0010	0.0167*
		98-03MAR	-0.0238	-0.0716	0.0478*	-0.0210	-0.0660	0.0450*	-0.0229	-0.0539	0.0309*	-0.0266	-0.0456	0.0190*	-0.0243	-0.0353	0.0110*
	12 month	55-65MAR	0.0196	0.0124	0.0072*	0.0212	0.0110	0.0102*	0.0205	0.0109	0.0096*	0.0192	0.0111	0.0081*	0.0194	0.0124	0.0070*
		66-82MAR	0.0184	-0.0059	0.0243*	0.0214	-0.0081	0.0295*	0.0230	-0.0095	0.0325*	0.0234	-0.0096	0.0330*	0.0183	-0.0058	0.0241*
		83-97MAR	0.0242	-0.0141	0.0383*	0.0233	-0.0117	0.0350*	0.0226	-0.0102	0.0327*	0.0202	-0.0086	0.0288*	0.0161	-0.0043	0.0204*
		98-03MAR	-0.0339	-0.0635	0.0297*	-0.0380	-0.0583	0.0203*	-0.0392	-0.0463	0.0072*	-0.0391	-0.0409	0.0018	-0.0334	-0.0326	-0.0009

* significant at the 99% level

^ significant at the 95% level

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