



Wealth Management Services White Paper

The Case for Converting Traditional Managed Account Assets to Overlay

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Article Summary

Wealth management firms traditionally have used mutual funds and separate accounts to diversify client portfolios. However, these investment vehicles, particularly mutual funds, are often more tax inefficient, expensive and inflexible in terms of client-specific restrictions than a models-based solution known as overlay. In the article, the overall cost and tax savings differential between a mutual fund solution and a comparable overlay offering is quantified using a sample equity allocation. Also, non-financial benefits of overlay, such as holistic client management, increased client personalization, advanced tax optimization capabilities and transparency in holdings and expenses, are examined. The article documents a compelling case as to why wealth management firms should consider using overlay models in place of mutual funds and separate accounts for many of their affluent and high-net-worth clients.

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Author Biography

Bill Martin presently serves as a director of product development within FDX Advisors' Wealth Management Services Division. In this capacity, Bill is responsible for overseeing the design and implementation of investment technology solutions that automate the process involved in creating customized portfolios and trading third-party manager models. Bill has over a decade of industry experience, including investment banking, securities analysis and portfolio management. He holds an M.B.A. with a concentration in finance from the University of Kansas and is a CFA charter holder.

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Mutual funds provide an easy way to diversify client portfolios. However, funds have inherent problems. They often are tax inefficient, have high embedded fees, and cannot accommodate client-specific restrictions. Separate Account Manager platforms can address these problems, but present unique challenges such as high asset minimums and expensive infrastructure.

Even with these limitations, many wealth managers opt to construct portfolios for their clients using mutual funds and/or funds along with individual securities. Additionally, wealth managers often offer separate account programs for their higher-net-worth clients. Diversification is achieved through mutual funds and separate accounts, but at a relatively higher price in terms of taxes, fees, and inflexibility than an investment management solution known as overlay.

The High Cost of Mutual Fund Ownership

In 2004, the average expense ratio (total management fees and operating expenses as a percentage of fund assets) for equity mutual funds managed by the 25 largest fund complexes was 1.56% (Bogle, 2005). This high toll excludes transaction costs, sales charges, opportunity costs, and taxes. When these additional fees are included, the costs of mutual fund ownership present a high hurdle for equity funds and their shareholders to overcome just to capture stock market returns, let alone additional alpha.

Exhibit 1 shows how mutual fund investors have been penalized by this high hurdle during the period from 1983 to 2003.

Exhibit 1: Mutual Fund Returns vs. the Stock Market	
Measure	1983 – 2003
Stock market return (S&P 500)	13.0%
Average equity fund return	10.3%
Shortfall	2.7 percentage points (pps)
Fund share of market return	79%

Source: Lipper, Bogle [2005]

The 2.7 percentage points (pps) annual shortfall is largely a factor of the average expense ratio during this period of 1.4% and transaction costs of approximately 1.0% (Bogle, 2005). The remaining shortfall is likely a result of opportunity costs, as funds are rarely fully invested in stocks.

Taxes Matter

What this 2.7 pps shortfall fails to capture is the impact of taxes. When factoring in the toll imposed by federal and state taxes, the annual shortfall between the stock market return and the return realized by fund shareholders nearly doubles. Bogle [2005], founder of The Vanguard Funds, recently documented this reality. In his article, Bogle found that after-tax returns of equity funds lagged pretax returns by 2.2 pps annually during the 15-year period from 1990 to 2004. Similarly, in an earlier article, Jeffrey and Arnott [1993] showed that annual

turnover of 100% would require a manager to generate 2.8 pps in excess return to pay for the tax liability incurred from trading (as compared to the tax liability incurred from holding a passive portfolio with 5% annual “frictional” turnover). However, Arnott, Berkin and Ye [2001] expanded upon the Jeffrey and Arnott article and demonstrated that not all turnover is bad, especially turnover from loss harvesting that generates tax savings for investors. They clarify that the real issue for taxable investors is net capital gain realization.

The pooled structure of mutual funds makes funds inherently tax inefficient. Due to this structure, fund investors can find themselves buying into other investors’ gains. This reality was painfully magnified in 2001 and 2002 when many mutual fund shareholders saw their portfolio values decline yet were hit with significant taxable gains. However, the pooled structure of mutual funds can benefit shareholders when funds experience net positive cash flow, diluting a fund’s overall capital gain position (Shoven, Dickson and Sialm, 2000).

What is Overlay?

Overlay is an investment management solution designed to overcome the shortfalls of mutual funds and separate accounts, while providing wealth managers with an effective way to achieve diversification and tax-efficient personalization for their affluent and high-net-worth clients. These results are accomplished through a change in how third-party money managers deliver the returns generated by their investment recommendations, hereafter referred to as alpha, and innovative technology.

Until recently, third-party managers relied on mutual funds and separate accounts as their two primary vehicles for delivering alpha to the investing public. However, with the creation of overlay, a compelling third option is now available. Overlay enables money managers to deliver alpha in the form of model portfolios to an overlay manager. This process bifurcates the distinct functions of alpha generation from client management, allowing each party to focus on its core competency. Third-party managers can concentrate on investment research, security selection, and model construction, while the overlay manager, who owns the client relationships and has trading discretion, can focus on managing client-specific factors such as asset allocation, account restrictions and tax considerations.

Technology is the plumbing that makes overlay work by providing connectivity between the model providers, overlay managers, custodians and executing brokers as well as facilitating trade generation and straight through processing of alpha. Third-party managers’ models can be electronically uploaded into software used by overlay managers to trade client portfolios. This software ranges from simple modeling systems to intelligent portfolio management systems that enable overlay managers to run multiple models in a single account and automate pre-trade compliance, active tax management and risk management. Although wealth management firms can run overlay strategies via basic modeling systems, the maximum benefit to the end client (in the form of higher net after-tax returns) is achieved when firms manage their overlay strategies using systems with more advanced capabilities. Also, if wealth management firms prefer not to run this type of technology in-house, the overlay function can be outsourced to third-party managers with expertise in running overlay systems.

A More Tax-Efficient Alternative

In theory, the goal of managing taxable portfolios should be to maximize risk-adjusted, after-tax returns. Unfortunately, many wealth management firms narrowly focus on maximizing clients' risk-adjusted, pretax returns. These two objectives sound quite similar, but, as previously illustrated, have substantially different results. Wealth management firms too often emphasize the search for alpha rather than minimize the known and often large tax impact generated in this uncertain quest for alpha (Luck, 1999).

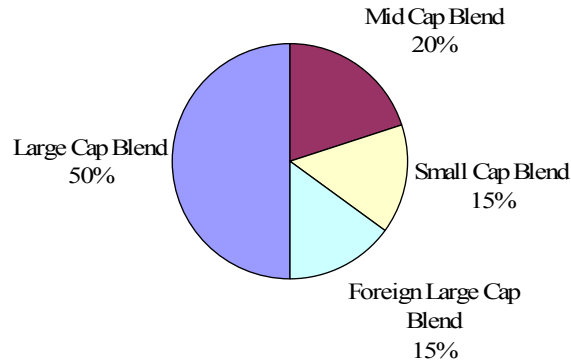
Overlay enables wealth management firms to circumvent the problems associated with such a myopic view and maintain a healthier balance between the search for alpha and active tax management. Investment research in the form of model portfolios are managed according to a client's specific tax considerations and pre-trade compliance constraints. Wealth managers who run overlay strategies become their clients' tax quarterback. Equipped with advanced portfolio management systems that have tax optimization capabilities, overlay managers can materially add value to client portfolios on a net after-tax basis. In a paper by Stein and McIntire [2003], the authors showed that an overlay manager can contribute as much as 60 basis points annually to their clients' net after-tax returns by avoiding short-term capital gains, actively harvesting tax losses and avoiding wash sale violations.

A Less Expensive Alternative

Not only is overlay a more tax-efficient way of managing client assets than mutual funds, it also can be a less expensive alternative. The cost of purchasing overlay models is often substantially less than the cost of either mutual fund ownership or the fees associated with separate account management. An overlay platform – including manager models, initial and ongoing manager due diligence, sales automation and portfolio management technology – generally is priced around 0.60% and tiers down from this price point based on platform assets¹. In contrast, the expense ratio of equity funds is often twice as much, or more, than an overlay solution.

To illustrate the cost savings of overlay vs. mutual funds, several scenarios based on the target equity allocation shown in Exhibit 2 are considered below. Although this allocation is used merely for illustrative purposes, wealth managers should not overlook the importance of designing asset allocation policies to maximize the after-tax wealth of their high-net-worth clients. The tax-exempt/institutional approach of broad style diversification can generate higher taxes and costs for taxable investors as explained by Brunel [2000]. Arguably, a better method to maximize clients' after-tax wealth is to structure a multi-manager portfolio using a core and satellite design. Quisenberry [2003] found that allocations of 50% or more to the core portion can increase after-tax returns, reduce the overall tracking error risk of the multi-manager portfolio to its benchmark index, or both.

Exhibit 2: Sample Equity Allocation



The weighted average expense ratio in which mutual funds are used exclusively to fulfill the objectives of the sample allocation is first calculated. The expense ratio used for each equity category is based on Morningstar's category average expense ratio for no-load funds for the period ending November 30, 2004. Based on these criteria, the weighted average expense ratio for a fund-only solution using no-load funds is 0.90%, as shown in Exhibit 3.

Exhibit 3: Weighted Average Mutual Fund Expense Ratio Based on Sample Equity Allocation

Equity Category	Average Expense Ratio of No-Load Mutual Funds
Large Cap Blend	0.74%
Mid Cap Blend	1.05%
Small Cap Blend	1.03%
Foreign Large Cap Blend	1.10%
Weighted Average Expense Ratio	0.90% ^{2,3}

Source: Morningstar

As previously highlighted, the expense ratio is merely one component of the total fees imposed on mutual fund shareholders. Exhibit 4 presents a more complete picture of the total cost of fund ownership based on our sample equity allocation, including the calculated weighted average expense ratio, estimated trading expenses, and a distributing firm's advisory fee of 1.00%.¹ Based on these parameters, the overall cost of a mutual fund-only solution using no-load funds is 2.90% per year. Exhibit 4 also contrasts this overall cost of fund ownership with the total cost of an overlay solution for the sample equity allocation, factoring in an overlay platform fee of 0.60%,¹ estimated trading expenses, advisory fees, and savings from active tax management as established by Stein and McIntire [2003].

Exhibit 4: Mutual Fund and Overlay Overall Cost Comparison Based on Sample Equity Allocation

Costs	Mutual Fund	Overlay
Weighted Average Mutual Fund Expense Ratio / Overlay Platform Fee	0.90%	0.60% ¹
Trading ^a	1.00%	1.00% ⁴
Firm's Advisory Fee	1.00% ¹	1.00% ¹
Savings from Active Tax Management	0.00%	+0.60% ^b
Total Costs	2.90%	2.00%

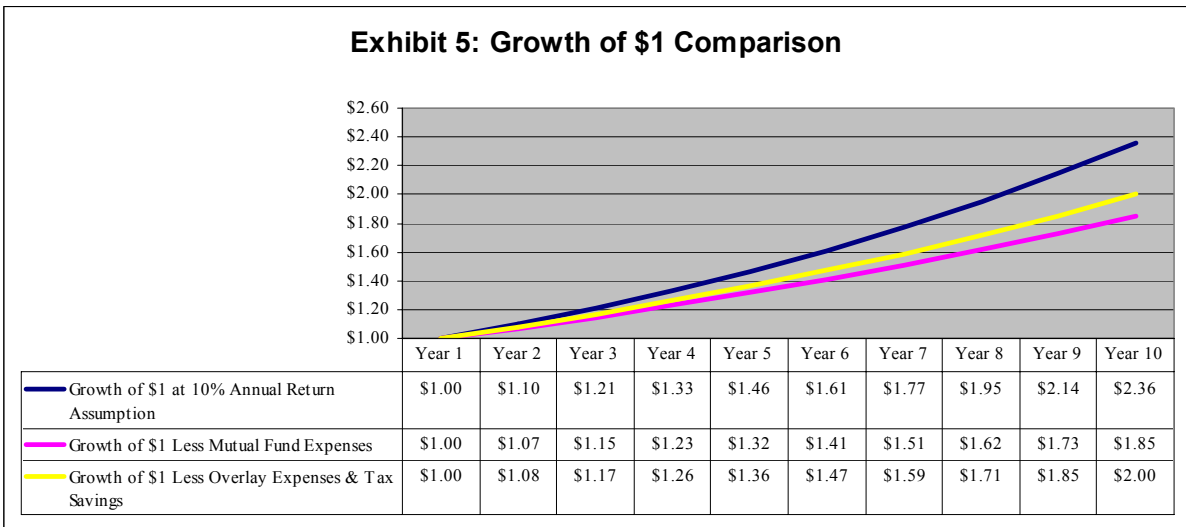
^aBogle [2005]

^bMcIntire and Stein [2003]

As Exhibit 4 illustrates, the mutual fund solution based on the sample equity allocation is notably more expensive for investors in a comparable overlay offering, with a differential of 0.90 pps in overall expenses and savings from active tax management. The confiscatory effect of this fee differential results in significant reduction in earnings potential over time.

For example, consider the impact of this differential over a 10-year period by examining the growth of \$1.00 based on a 10% annual pretax return assumption. During this 10-year period, as shown in Exhibit 5, \$1.00 grows to \$2.36 before factoring in expenses. The growth was limited to \$2.00 when taking into consideration the 2.00% overall cost of overlay, capturing 85% of the growth potential in this example. However, the mutual fund solution based on our sample equity allocation grew to only \$1.85 over this period, capturing only 78% of the return potential.

Exhibit 5: Growth of \$1 Comparison



Proprietary Considerations

Many wealth management firms offer proprietary strategies in combination with mutual funds and separate accounts. For example, it is quite common for a wealth management firm to run an internal core strategy comprised of large cap stocks and complement this proprietary component with mutual funds for the mid cap, small cap and foreign allocations. Similar to the case previously made for converting mutual fund only-solutions to overlay, a compelling argument can be made for converting the mutual fund component used with a proprietary strategy to overlay.

To demonstrate this case, using the sample equity allocation (see Exhibit 2), a weighted average expense ratio is determined for the proprietary and mutual fund solution, and then compared to the cost of running a proprietary strategy along with overlay models in place of the mutual funds. It is assumed that the large cap core component is managed internally with no explicit cost in the case in which mutual funds are used along with the proprietary strategy. However, in the overlay solution, it is assumed that a technology fee of 0.10%¹ is assessed to the large cap component, thus enabling the overlay manager to manage, in a tax-efficient manner, the proprietary strategy and overlay models in a single account. Also, an overlay platform fee of 0.60%¹ is applied to the portion of the allocation in which overlay models are used.

Exhibit 6, which factors in the aforementioned assumptions, shows that the proprietary solution with no-load funds has a weighted average expense ratio that is significantly more than the cost of the proprietary solution in which overlay models are used (0.53% vs. 0.35%). Exhibit 6 does not include the other costs of managing these types of accounts such as trading costs and the distributing firm's advisory fees. When these other costs along with the tax savings from overlay are included into a comparative analysis, the overlay solution again stands out as having a much lower overall cost to investors than the fund solution.

Exhibit 6: Expense Ratio Comparison of Proprietary Equity and Mutual Fund Completion Solution vs. Proprietary Equity and Overlay Solution Based on Sample Equity Allocation		
Equity Category	Average Expense Ratio of No-Load Mutual Funds	Overlay Costs
Large Cap Blend – Proprietary Equity	0.00% ⁵	0.10% (technology fee) ¹
Mid Cap Blend	1.05%	0.60% ¹
Small Cap Blend	1.03%	0.60% ¹
Foreign Large Cap Blend	1.10%	0.60% ¹
Weighted Average Expense Ratio/Overlay Costs	0.53%^{6,7}	0.35%⁸

Source: Morningstar

Benefits of Overlay, Beyond the Economics

In addition to being significantly less expensive than mutual fund and separate account offerings, overlay enables wealth management firms to manage client portfolios of nearly all sizes in ways previously limited to only the wealthiest of clients. These additional benefits of overlay include:

- Holistic view of client holdings as compared to assets being segmented into multiple sub-accounts that get traded in isolation from the whole
- Greater capabilities for managing client restrictions such as sector or industry limitations, capitalization preferences, growth or value tilts and social criteria
- Elimination of unnecessary trading, which result from a smaller cap manager selling an asset and a larger cap manager buying the same asset when indexes are reconstituted or from *de minimus* trades
- Pre-trade compliance functionality that honors client-specific restrictions such as buy and sell restrictions
- Better risk control by balancing trade-offs between tax benefits and the cost of missing the target
- Easier rebalancing than the cumbersome processes of reallocating assets between multiple separate account managers
- Lower minimum account size giving clients access to managers that were previously only accessible to the ultra-wealthy
- Advanced tax optimization capabilities that facilitate the policing of wash sales, deferring short-term gains when appropriate, actively harvesting losses year round, selling the best available tax lot, automating tax-sensitive withdrawals, etc.
- Transition management tools that provide functionality to limit turnover and set tax budgets for managing accounts with low basis holdings
- Transparency in holdings and expenses

For years wealth management firms have been unable to deliver on the promise of personalization and optimization of a client's total portfolio. An optimized product was the nearest alternative that firms were actually able to provide clients, albeit an inferior substitute to a truly client-centric solution. Now, with the advent of overlay, wealth managers are able to offer customized, tax-efficient solutions for their affluent and high-net-worth clients, providing portfolio optimization, not merely product optimization. Because of these capabilities, overlay also will enable wealth management firms to deliver on their fiduciary responsibilities and operate more confidently in an environment with increasing regulatory and compliance demands.

Conclusion

Wealth management firms and their clients have benefited from recent advances made in the technology industry. The complex tasks of managing individual portfolios – including active tax management, pre-trade compliance and risk control – can now be done more efficiently and consistently than before, with the latest innovations in portfolio management systems. Combine this technology with managers now willing to deliver alpha in the form of overlay models, and one can see how far the practice of wealth management has advanced in a relatively short period of time.

Prior to these advances, mutual funds provided one of the most accepted means of diversifying portfolios for clients with less than \$500,000 in investable assets. Fund solutions, however, have inherent disadvantages, such as tax inefficiency, relatively high embedded expenses and lack of ability to customize based on client constraints. Overlay overcomes these challenges, and does so at a much lower expense than the cost of a comparable fund or separate account solution. Mutual funds and separate accounts will continue to have their place in the spectrum of investment management solutions, with mutual funds likely remaining a preferred option for retail clients with less than \$50,000 to \$100,000

of investable assets. However, over time, the roles of mutual funds and separate accounts are likely to diminish now that overlay, the next generation of investment management, has arrived.

Acknowledgements

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Endnotes

- ¹ Pricing and fee estimates are based on the author's professional experiences in working with wealth management firms and vendors.
- ² Calculation: $0.90\% = 0.74\% \times 50\% \text{ Large Cap Blend weight} + 1.05\% \times 20\% \text{ Mid Cap Blend weight} + 1.03\% \times 15\% \text{ Small Cap Blend weight} + 1.10\% \times 15\% \text{ Foreign Large Cap Blend weight}$.
- ³ Based on the sample allocation, if front-end load funds are used instead of no-load funds, the weighted average expense ratio for the fund-only solution is 1.37% vs. 0.90% for no-load funds. Calculation: $1.37\% = 1.22\% \text{ Large Cap Blend average expense ratio} \times 50\% \text{ Large Cap Blend weight} + 1.40\% \text{ Mid Cap Blend average expense ratio} \times 20\% \text{ Mid Cap Blend weight} + 1.49\% \text{ Small Cap Blend average expense ratio} \times 15\% \text{ Small Cap Blend weight} + 1.74\% \text{ Foreign Large Cap Blend average expense ratio} \times 15\% \text{ Foreign Large Cap Blend weight}$ (Source: Morningstar).
- ⁴ In an attempt to present a conservative comparison between the overall costs of a fund-only solution vs. an overlay solution, trading costs for the overlay solution are shown as the same trading estimates for mutual funds based on Bogle's research [2005]. However, based on the author's professional experiences in working with wealth management and brokerage firms and as shown in the simulations by Stein and McIntire [2003], trading costs for an overlay solution often can be less than the trading costs of a comparable traditional managed account solution, due to the lower turnover that can result from active tax management.
- ⁵ In an attempt to present a conservative comparison, no costs were factored in managing the large cap proprietary component. However, there are likely direct and indirect expenses related to labor and existing technology for managing this portion of the account.
- ⁶ Calculation: $0.53\% = 0.00\% \times 50\% \text{ Large Cap Blend weight} + 1.05\% \times 20\% \text{ Mid Cap Blend weight} + 1.03\% \times 15\% \text{ Small Cap Blend weight} + 1.10\% \times 15\% \text{ Foreign Large Cap Blend weight}$.
- ⁷ Based on the sample allocation, if front-end load funds are used along with the proprietary equity component instead of no-load funds, the weighted average expense is 0.76% vs. 0.53% for the no-load solution. Calculation: $0.76\% = 0.00\% \text{ expense for Large Cap Blend proprietary component} \times 50\% \text{ Large Cap Blend weight} + 1.40\% \text{ Mid Cap Blend average expense ratio} \times 20\% \text{ Mid Cap Blend weight} + 1.49\% \text{ Small Cap Blend average expense ratio} \times 15\% \text{ Small Cap Blend weight} + 1.74\% \text{ Foreign Large Cap Blend average expense ratio} \times 15\% \text{ Foreign Large Cap Blend weight}$ (Source: Morningstar).
- ⁸ Calculation: $0.35\% = 0.10\% \text{ technology fee} \times 50\% \text{ Large Cap Blend weight} + 0.60\% \text{ overlay platform fee} \times 20\% \text{ Mid Cap Blend weight} + 0.60\% \text{ overlay}$

platform fee x 15% Small Cap Blend weight + 0.60% overlay platform fee x 15% Foreign Large Cap Blend weight.

References

- Arnott, Robert D., Berkin, Andrew L. and Jia Ye. 2001. "Loss Harvesting: What's It Worth to the Taxable Investor?" *Journal of Wealth Management*. Spring 2001, pp. 10-18.
- Berkin, Andrew and Jia Ye. 2003. "Tax Management, Loss Harvesting, and FIFO Accounting." *Financial Analysts Journal*. July/August 2003, pp. 91-102.
- Bogle, John. 2005. "The Mutual Fund Industry 60 Years Later for Better or Worse?" *Financial Analysts Journal*. vol. 61, no. 1. January/February 2005, pp. 15-24.
- Brunel, Jean L. P. 2000. "Active Style Diversification in an After-Tax Context: An Impossible Challenge?" *Journal of Private Portfolio Management*. Spring 2000, pp. 41-50.
- Freeman, Kevin. 2004. "A Primer for Models-Based Sponsor Platforms: Manager Selection and Fee Considerations." *Senior Consultant*. vol. 7, no. 10, October 2004, pp. 1-5.
- Jeffrey, Robert and Robert Arnott. 1993. "Is Your Alpha Big Enough to Cover Its Taxes?" *Journal of Portfolio Management*. Spring 1993, pp. 15-25.
- Jeffrey, Robert. 1995. "Tax Considerations in Investing." *The Portable MBA in Investments*. pp. 352 – 375.
- Luck, Christopher. 1999. "Tax-Efficient Investing." *Journal of Private Portfolio Management*. Spring 1999, pp. 51-57.
- Pruitt, Ron. 2003. "A Comprehensive View of After-Tax Investing and Tax Efficiency." *Senior Consultant*. vol. 6, no. 5. May 2003, pp. 1-6.
- Pruitt, Ron. 2005. "How Can an Overlay Manager Make Separately Managed Accounts More Tax Efficient?" *Financial-Planning.com*. March, 2005. http://www.financial-planning.com/pubs/sma_adviser/20050317103.html.
- Quisenberry, Clifford H. Jr. 2003. "Optimal Allocation of a Taxable Core and Satellite Portfolio Structure." *Journal of Wealth Management*. Summer 2003, pp. 18-26.
- Shoven, John B., Dickson, Joel M. and Clemens Sialm. 2000. "Tax Externalities of Equity Mutual Funds." NBER Working Paper No. W7669. April 2000. <http://ssrn.com/abstract-228143>.
- Stein, David and Greg McIntire. 2003. "Overlay Portfolio Management in a Multi-Manager Account." *Journal of Wealth Management*. Spring 2003, pp. 57-71.
- Winkel, Michael. 2005. "Investment Structures in Banking." *SunGard Advisor Technologies-sponsored White Paper*. Spring 2005.