

Transition Management in Times of Market Volatility

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Recent market volatility has spanned nearly all investable asset classes. Even the most conservative of investment policies has seen dramatic shifts in the underlying asset allocations of its plans, possibly resulting in the need to make some major changes to investment strategies. However, the markets have been understandably paralyzing for most investors. It is more important than ever to take a step back, review the condition of the portfolio, and carefully construct a plan of attack to get the portfolio back into a position where it can once again enjoy the returns and diversification benefits that the original investment policy was intended to achieve.

From the vantage point of a transition manager, the goal should be no different than it was a year ago: to trade the portfolio in the most efficient way possible, while reducing costs and minimizing risks in order to preserve the assets being traded. It is, however, important to understand how tumultuous markets have changed the costs and risks of restructuring that portfolio. The unprecedented gyrations in financial markets and the ensuing stress experienced by once-sound financial institutions have effectively thrown the entire transitioning process into disarray.

The notion of the plan sponsor using transition managers to help reallocate fund assets is generally accepted as best practice. It is well documented that the movement of plan

assets is not free. Even in the most unassuming markets, there are sometimes large amounts of frictional trading costs incurred by the fund. The traditional reasons for hiring a transition manager are, therefore, magnified in erratic market conditions.

In order to understand how transition managers can mitigate these risks in these particularly unstable times, it is first important to understand how the increased market volatility has impacted the costs of transitioning assets.

A BREAKDOWN OF THE COSTS OF TRANSITIONING ASSETS

If we step back for a moment to look at and understand what the costs of transitioning assets are, we can better frame how recent market conditions have impacted trading costs.

Although the general concepts of cost are the same for both equities and fixed-income securities, they manifest themselves in different ways due to trading convention, exchange venue, and fragmentation of liquidity.

A Focus on Equity

Equity trading costs are broken down between explicit costs and implicit costs. The explicit costs, such as commissions, fees, taxes, and custody charges, are those that are known

beforehand with absolute certainty and are not impacted by market volatility.

The implicit costs are those that are not definitively known beforehand. Bid/offer spread, market impact, and opportunity cost, as documented in numerous studies, represent the largest components of slippage in “normal” times. In 2008, and especially in the fourth quarter, events in the equity and credit markets caused these implicit costs to explode. To understand how this occurred and the magnitude of these costs’ contributions to overall shortfall, we will look at some theoretical and practical ways each can be measured.

Bid/offer spread is the price a trader would pay to obtain liquidity or receive for providing liquidity. Exhibit 1 tracks a large-cap stock from May to October of 2008, demonstrating how the spread costs have increased dramatically from the second quarter to the fourth quarter of 2008.

Additionally, you can see that the liquidity bid or offered, reflected at particular price points (shown in the size column), has decreased dramatically, with volume in the fourth quarter only available for 100-share lots. It is this widening of the bid/offer spread and generally declining market depth that has caused an overall increase in the cost of trading in these turbulent times.

The mainstream market impact models employed in portfolio analytics include a wide variety of explanatory variables, from a stock’s daily share turnover to the company’s market capitalization. Among the variables consistently used in all models is a stock’s daily volatility, usually measured as the standard deviation of daily returns over the prior 30 trading days. Buying a highly volatile stock, for instance, will incur larger impact as dealers are likely to be very cautious with the amount of stock they put up near the best offered price. Not only do spreads widen, but depth of market falls off quickly behind the best bid and ask.

As evidenced in Exhibit 2, using the S&P 500 Index, 30-day volatility spiked in September 2008 with the failure of Lehman Brothers and started to ease off in early November.

As with the S&P 500, most portfolios saw the volatility of their individual components triple or quadruple during this time. Therefore, this alone would cause a rise of 25% to 50% in estimated market impact.

The other implicit cost that tends to be the highest contributor to overall shortfall is opportunity cost. This reflects the volatility of the net return of the existing portfolio and the target portfolio, as well as the ability or lack

EXHIBIT 1

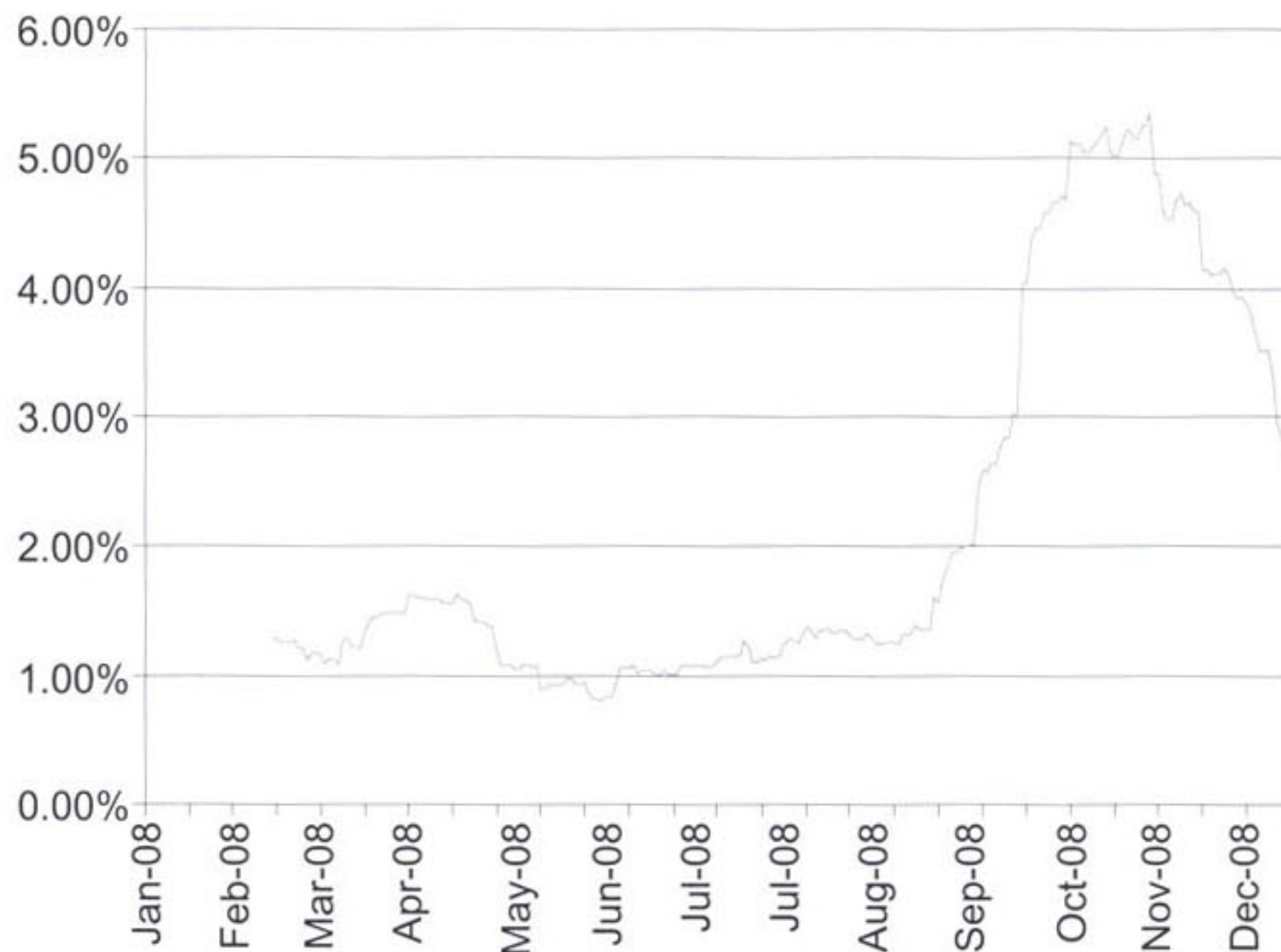
Spreads Widened and Liquidity Tightened between Q2 and Q4 of 2008, Resulting in Increased Trading Costs

May 15, 2008						October 10, 2008					
Time: 10 : 50 : 00			Min vol:			Time: 10 : 50 : 00			Min vol:		
Date: 5/15			Price Range:			Date: 10/10			Price Range:		
JPMORGAN CHASE & CO			PRICE 44.23			JPMORGAN CHASE & CO			PRICE 40.66		
Time	E	Bid/Trd/Ask	E	Size	Cond	Time	E	Bid/Trd/Ask	E	Size	Cond
10:50:00	N	45.94/45.95	N	1 x 3		10:50:00	N	38.39/38.43	N	1 x 1	
10:49:56	N	45.93/45.95	N	8 x 5		10:49:59	N	38.38/38.43	N	1 x 1	
10:49:55	N	45.93/45.95	N	8 x 3		10:49:59	N	38.38/38.46	N	1 x 1	
10:49:55	N	↓45.94		4	IS	10:49:59	N	↓38.39		1	
10:49:55	N	45.93/45.95	N	8 x 1		10:49:59	N	38.39/38.46	N	1 x 4	
10:49:55	N	45.94/45.96	N	4 x 12		10:49:58	N	38.38/38.46	N	1 x 1	
10:49:55	N	45.94/45.96	N	6 x 11		10:49:58	N	38.36/38.47	N	16 x 1	
10:49:55	N	45.94/45.96	N	8 x 9		10:49:58	N	↓38.42		1	
						10:49:57	N	38.42/38.47	N	1 x 1	

Source: Bloomberg.

EXHIBIT 2

S&P 500: 30 Day Moving Volatility



thereof, to achieve execution at prevailing prices. Opportunity cost is not just a function of each asset's individual volatility, but also how each asset is correlated with other portfolio constituents. In most cases, it is measured as the tracking error of the existing portfolio to the target or the volatility of the difference in returns. In practice, opportunity cost is lowest when the investment styles, stock selection, etc. of the old portfolio manager match that of the incoming manager. While plan sponsors have their reasons for changing managers and would like to expedite the process without delay, they at least benefit from a natural hedge until the assets are transitioned. In recent months, however, this can less be considered a "given."

Many days in October and November of 2008 witnessed the major indices moving 7% or more in a day's trading. The financial sector, perceived as ground zero for the evolving crisis, saw daily swings greater than 10% as bankruptcy and bailout headlines emerged one after the other. The technology and biotech sectors have, for now, been replaced by financials as the sector with the highest beta and greatest contribution to risk. This is significant to plans benched to the S&P 500, as financials entered the year with a 16% weighting. As a result, opportunity cost for plans in between managers with very similar styles

rose dramatically during this time of increased volatility. Exhibit 3 shows 30-day moving daily tracking error between the Russell 1000 and the S&P 500, two domestic large cap indices that tracked quite closely before fourth-quarter 2008. By mid-November the moving tracking error had increased five-fold.

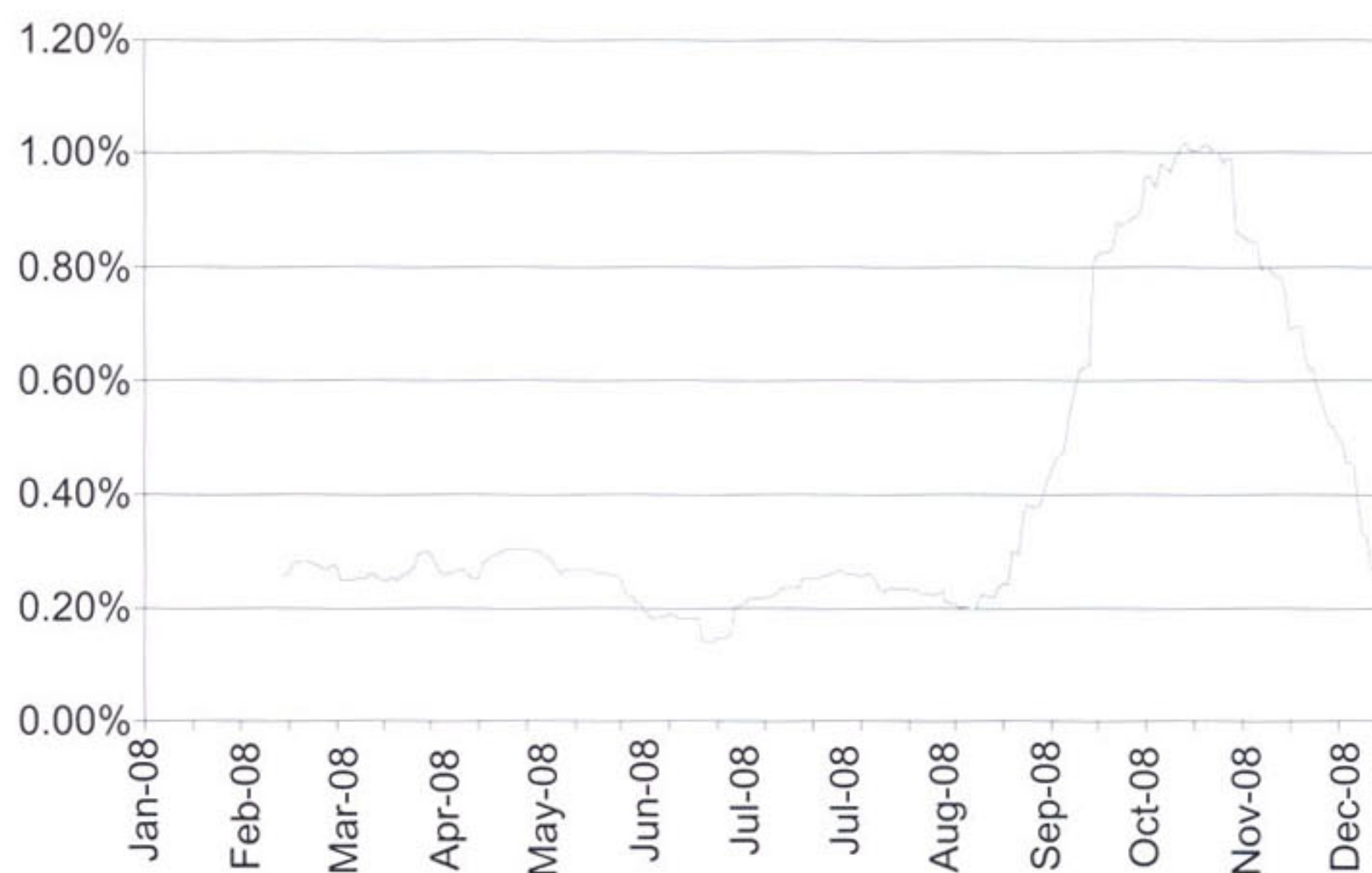
A notable characteristic of the recent market dislocation is the broad scope of the companies and sectors affected. Unlike past bear markets that exhibited the greatest volatility in a particular industry, such as telecom/Internet or biotech, the current crisis features many companies once thought of as "blue chip," and with sizeable weightings in the S&P 500, Russell 1000, and similar large-cap indices. Therefore, an investment manager having a position in one of these securities would have introduced significant risk to a plan in transition in September of 2008. The defining nature of recent volatility, then, is that risk is not just originating from traditionally high-beta market segments, but from all corners of the investment universe.

A Focus on Fixed Income

The turbulence in the overall market is taking a similar toll on transitioning fixed-income securities, causing

EXHIBIT 3

Russell 1000—S&P 500: 30 Day Moving Tracking Error (Daily)



Note: Volatility has widely affected all corners of the investment universe, including the S&P 500 and Russell 1000 indices.

trading costs to rise. Specifically, in the fourth quarter of 2008, there were dramatic increases in bid/offer spreads in bonds, and liquidity in many segments of the fixed-income markets all but dried up. These two events have significantly increased the cost of trading fixed-income securities.

The fixed-income securities consistently rallying toward the end of 2008 were Treasuries. However, the daily price swings were swift and violent, with yields reaching lows reminiscent of the 1940s. As seen below in Exhibit 4, the 30-year U.S. Treasury touched 2.5% in mid-December, well south of yields seen in the issue since regular auctions started in 1977. Thus, short-term interest rate risk is the greatest contributor to opportunity cost in the government portion of bond portfolios.

The tumultuous markets are impacting the way transition managers and plan sponsors approach trading these securities. When considering changes to a fixed-income portfolio, it is important to realize that certain segments, particularly mortgage-backed securities (MBS) and lesser credit bonds, will most likely not trade at the prices reflected on a monthly valuation statement. Updated valuations should be obtained in order to get a more accurate estimate of the “tradeable” value of the portfolio (a service your transition manager may be able to provide).

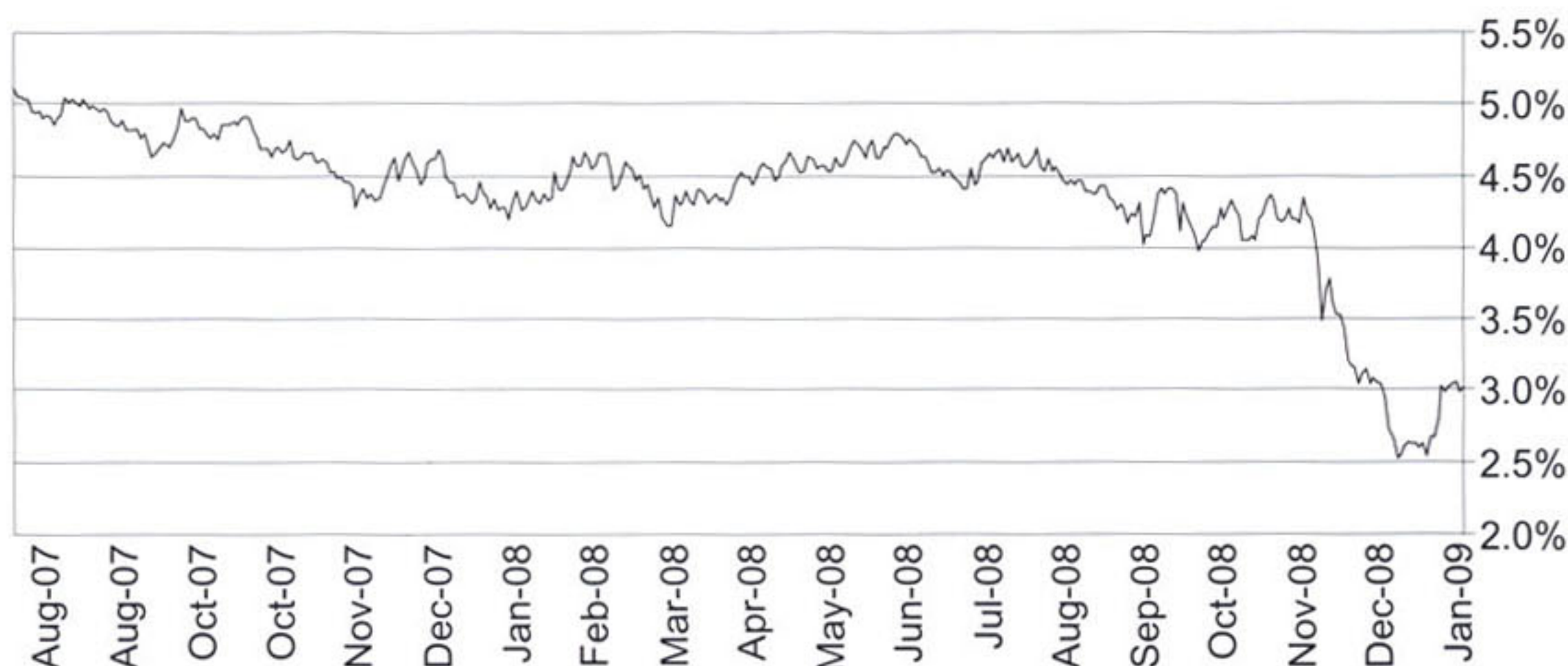
Additionally, these less-liquid segments of the bond market are dictating the timing of overall transitions, because the time it takes to find a willing buyer is dramatically increasing. The mortgage-backed securities market and related markets such as collateralized mortgage obligations (CMOs), asset-backed securities (ABS), and structured securities such as collateralized debt obligations (CDOs) are especially fragmented in this environment. For example, the market for mortgage pools remains quite liquid, and a selected list of mortgage dealers can typically provide tight competitive pricing quite easily. Yet, many of the other items mentioned earlier require a longer period to trade and are very reliant on the end investor to provide fair value, as the dealer market is very reluctant to hold these items in inventory.

Tools for the New World

Now that we understand how the changing market conditions and increased volatility have impacted the costs of transitioning assets, it is clear that traditional trading strategies are ill-equipped to handle today’s transition management mandates. The onus is then on the transition manager, the manager’s quantitative team, and their respective trading desks to maintain and develop models and

EXHIBIT 4

U.S. 30 Year Treasury, 18 Month Performance, Yield



Note: Volatility has widely affected all corners of the investment universe, including S&P 500 and Russell 1000 indices.

algorithms to incorporate the new environment of short-term price movements and fragmentation of liquidity.

Despite challenging market conditions, there are great opportunities to curtail implicit costs. Intelligent trade-scheduling algorithms have flourished, aided by risk models built specifically for short-term, impact-tracking error optimizations. These algorithms are superior to the traditional basket-VWAP programs used in the past. They are targeting the benchmark appropriate for a transition: Implementation Shortfall.

Traditional off-exchange crossing venues are now being outdone by a myriad of dark pools and alternative trading systems. These days it is not always the best approach to allocate a portion of an order to a sales trading desk or an index fund, in the hopes of finding a match at an arbitrary price point (end-of-day close, VWAP). Now smart routing technology is enabling the trader to locate

the other side throughout the day with minimal impact. A transition manager with substantial trading technology will implement this trading plan.

Plan sponsors are now, more than ever, giving great care and consideration to making the right investment decisions. Equal care should be given to preserving those assets during the transition. As we reviewed, there are costs and risks involved in every transition, and monitoring those costs is critical to controlling them. Your transition manager should be a trading expert, with vast market knowledge and access to substantial liquidity. With the right trading tools and technology, a transition manager will minimize costs and risks in the most volatile of markets.

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