Do you really need T+3 liquidity for your entire defensive portfolio?

Liquidity is a topic that consumes a lot of attention of superannuation fund investors – but many perspectives are rooted in instinct and gut feel – rather than an analysis of different liquidity scenarios. This article focuses on liquidity from an asset allocation or whole of fund perspective. One of the issues we strike is investors seeking a higher level of liquidity for their defensive assets than for their portfolio more broadly. In our view this isn't justified. Investors can have a material share of their defensive assets invested in less liquid strategies (and earn a higher return as a result), without compromising their capacity to rebalance – even in severe downside scenarios.

Discussion

The first point is that liquidity is not binary - assets and asset classes are not liquid or illiquid. Rather there is a continuum of illiquidity. Simply being listed in not a panacea. Likewise, the same asset can be liquid for one investor (a small investor whose position is only a fraction of a day's market trading) while being illiquid for another (a large investor with a very large position). However, for the purposes of this article, we have adopted market conventions and consider assets either liquid (ie T+3) or illiquid.

The primary need for liquidity is to rebalance. That is, to buy or sell assets in order to bring the actual asset allocation closer to target allocation. In addition to rebalancing, superannuation funds can need cash to:

- pay benefits to members;
- to meet forward investment commitments (for example, calls on private equity fund commitments); and
- to fund currency hedging payments.

For most funds, each of these tends to be pretty small – particularly compared to total assets.

For example, for most funds benefit payments are more than covered by inflows (although this is changing as fund memberships age).

Currency hedging payments are only large if a fund has a large allocation to currency hedged illiquid assets. For liquid assets, like overseas government bonds and equities, the underlying asset can be sold to fund hedge payments and, hence, there is no liquidity imposition on the rest of the portfolio. However, I will come back to funding currency hedging on illiquid assets later.

Rebalancing is where the main action is. Funds don't 'freeze' because they don't have enough liquid assets to meet payments. They freeze because their actual asset allocation has drifted, or been driven, a long way from SAA targets.

This occurs in two main ways:

- **Market moves.** For example, an equity market crash or a financial crisis. In this scenario, some parts of the portfolio (for example, equity markets) can dramatically under- (or out-) perform other parts and push the asset allocation out of whack. The best example is a stock market crash – this will see listed equities substantially underperform defensive assets. Illiquid growth assets (e.g. infrastructure or property) might underperform defensives, but not by quite as much as equities. The result of this is the fund will end up overweight defensives, underweight growth assets and, within growth assets, overweight illiquids relative to listed markets. In this situation, a fund will need to sell some defensive assets to buy more listed equity.
- **MIC switching.** Most funds operate member investment choice frameworks. One outcome of these options is that a fund can suffer an internal run. That is, during a financial crisis, members switch investment choices and this drives a need for a fund to rebalance. It is important to note that this switching behaviour – which was quite pronounced during the GFC – is inevitably from growth asset dominated investment choices into cash/fixed income. Members run to cash/fixed income – they don't run the other way! While members can lose confidence quickly – causing some to switch to cash – they regain it only slowly, meaning the funds tend to trickle back to the

higher growth asset options. Thus, in a liquidity crisis, MIC switching driven rebalancing involves selling growth assets and buying defensives.

For most funds – where MIC take-up is relatively low – the MIC switching effect is relatively small (for example – net shifts to defensives of 1-5% of total assets occurred during the GFC) and, hence, the market move effect dominates outcomes.

In understanding these affects, it is useful to model potential scenarios so as to analyse the potential scale of rebalancing required. Consider a simple model where:

- a fund has a 70:30 asset allocation and starts at target weights;
- its liquid growth assets (i.e. listed equities) suffer a return shock;
- illiquid growth assets are assumed to fall by half the amount of the shock; and
- in a typical financial crisis, bond rates fall and this provides a capital gain – which we have assumed is 10%. Given the low starting level of bond rates today (compared to any other time in history) this may prove an optimistic assumption – but that is a question for another day.

The table below shows the results of this model for a 25% return shock. For a fund that started in line with its target asset allocation, the 25% return shock would push it 6.8% underweight growth assets with a matching overweight to defensive assets. To rebalance at a growth/defensive level would require the sale of 6.8 percentage points of defensive assets, or 18% of its defensive asset holdings. This model ignores MIC switching – but the switch effect would be to reduce the amount of rebalancing required – as members would be switching from growth to defensive.

	Initial Allocation ($)	Return	New Allocation ($)	New Allocation (%)	Deviation	Implied Rebalance
Cash	10	0%	10	11%	1.5%	
Bonds	20	10%	22	25%	5.3%	
Total Defensive	**30**	**7%**	**32**	**37%**	**6.8%**	**18%**
Liquid Growth	50	**-25%**	37.5	43%	-6.9%	
Illiquid Growth	20	-13%	17.5	20%	0.1%	
Growth	**70**	**-21%**	**55**	**63%**	**-6.8%**	
Total	***100***	***-13%***	***87***	***100%***	***0%***	

The next table maintains the same assumptions but shows the key outputs for a range of different size shocks.

Return Shock	-10%	-25%	-50%	-67%	-90%
Implied Illiquid Growth Overweight	0%	0%	1%	2%	3%
Implied Liquid Growth Underweight	-3%	-7%	-15%	-23%	-40%
Implied Growth Underweight	-3%	-7%	-14%	-22%	-37%
Implied Sale of Defensive (% of holding)	10%	18%	33%	42%	55%

The key takeout from this table is that while the extent of the underweight to growth assets grows with the size of the return shock, it takes very, very large shocks for this to require large sales of defensive assets. For example, a fall of 50% - which is an extremely severe outcome – would only necessitate the sale of around a third of defensive assets. To require half of defensive assets to be liquidated would require a fall in the order of 90% - at which point there might be broader issues for the superannuation system!

Astute readers might then say, but what about currency hedging of illiquids – doesn't that change everything? Illiquid currency hedged investments do create unique challenges for funds. However, as the analysis below shows, this is more because you have the potential for very high allocations to illiquid growth assets, rather than the pure liquidity implications of funding hedge payments.

The tables below are a simple extension of the model outlined above, with the following basic assumptions:

- currency hedging on liquid assets is funded from within the asset class itself;
- the return shock is associated with a depreciation of the Australian dollar of the same magnitude. That is, in a 20% equity market correction, the Australian dollar is assumed to depreciate by 20%. This makes the Australian dollar value of overseas currency hedged assets increase by 20% (before the impact of returns). It also means a hedge loss equal to 20% of the allocation to currency hedged illiquid assets will need to be funded from liquid assets; and
- all currency hedged illiquid assets sit within the growth asset class from a rebalancing perspective.

The key driver of different outcomes in this modelling is the allocation to currency hedged illiquid assets. The tables below show two scenarios. The first for a fund with 5% currency hedged illiquids (which is reasonably representative of the typical industry fund). The second is for a fund with 20% currency hedged illiquid assets. This would be a very high level of overseas illiquid investing and not representative of typical funds, but no less, it illustrates the effects.

Scenario with 5% allocation to Currency Hedged Illiquids						
Return Shock		**-10%**	**-25%**	**-50%**	**-67%**	**-90%**
Implied Growth Underweight		3%	5%	10%	16%	27%
Implied Illiquid Overweight		1%	2%	6%	8%	13%
Hedge Payments (% of defensives)		2%	4%	8%	10%	14%
Total Liquidity Requirement (% of defensives)		10%	18%	31%	41%	55%

Scenario with 20% allocation to Currency Hedged Illiquids						
Return Shock		**-10%**	**-25%**	**-50%**	**-67%**	**-90%**
Implied Growth Underweight		1%	1%	2%	2%	5%
Implied Illiquid Overweight		2%	5%	12%	19%	32%
Hedge Payments (% of defensives)		6%	16%	31%	42%	56%
Total Liquidity Requirement (% of defensives)		10%	19%	35%	46%	63%

For the typical fund, currency hedging doesn't make much difference. The impact of currency hedging is that illiquid assets, in net terms, fall in value by a little less and, hence, the need to rebalance at an aggregate growth/defensive level is smaller (compared to a scenario with no currency hedging). All else equal, this would reduce the need to sell defensive assets to rebalance, but this is largely offset by needing to fund the hedge payments themselves.

For a fund with very high currency hedged illiquid investments the aggregate impacts are similar – but the composition is very different. Aggregate liquidity requirements rise to 63% in the case of the 90% shock and are 35% for the 50% shock. This is very similar to the results for a typical fund. For a fund with a large overseas asset proportion – cash requirements to meet hedge payments are much larger (ie roughly four times higher). However, this is offset by a reduced need to rebalance from defensive assets to growth. For a fund with a larger allocation to currency hedged illiquids, the fall in the total allocation to growth assets is much lower (as currency movement on the overseas illiquids boosts the dollar allocation to growth assets). Thus, while more sales from defensives are needed to meet hedge payments, less is needed to rebalance between growth and defensive.

That is not to say the asset allocation outcomes under severe downsides for this second fund are particularly acceptable. For example, in the 67% shock scenario, the fund ends up 19% overweight illiquid growth assets – i.e. just under double the target asset allocation of 20%. This is clearly not acceptable – but no amount of liquidity in your defensive assets is going to cure it. It simply demonstrates the risks of large allocations to currency hedged illiquid assets – it is not that you can't fund hedge payments – it is an issue of losing control of your asset allocation.

Conclusion

Hopefully these simple models have provided an illustration of the factors in play for liquidity and rebalancing for funds. The key points we would like to draw out are:

- MIC switching is unlikely to drive a need for additional liquidity in defensive assets. Internal "runs" for funds will almost inevitably go from growth into defensive assets, not the other way around.
- Market driven rebalancing can drive requirements for liquidity in defensive assets as, following a market fall, defensive assets may need to be sold to fund rebalancing into growth assets. However, the extent of these requirements is quite bounded – a 50% market fall might necessitate selling around a third of defensive assets.
- Currency hedging of illiquid alternatives can make a difference – but not to the liquidity required from defensive assets. The impact of funding hedge payments is broadly offset by a smaller fall in the growth assets allocation. The real issue of currency hedged illiquids is ending up substantially overweight this sector – no amount of liquidity in your defensive assets is going to cure this problem.

In our view – the focus on liquidity for defensive assets isn't justified – investors can have a material share of their defensive assets invested in less liquid strategies (say a third to a half) without compromising their capacity to rebalance – even in severe downside scenarios. This frees up some of the defensive portion of the portfolio to pursue better risk adjusted returns, albeit with lower liquidity.