



PwC Treasury Broadsheet

Quarterly newsletter
of snippets and stories
from the world of
treasury management
- published by PwC
Treasury Advisory

1 March 2019

[\(Click to view\)](#)

[Directors need to understand liquidity](#)

Directors need to understand liquidity

Recent high profile liquidations have once again highlighted the increasing scrutiny and responsibility facing directors of both public and private companies. A strong focus of the most recent case has centred on operating while insolvent – deepening the hole for creditors and ultimately making any subsequent recovery more challenging.

[Winning the trust battle](#)

[RBNZ capital requirements: impact on businesses and treasurers](#)

At its core, this problem relates to liquidity and working capital management – two risks managed by treasury. It highlights the risks when directors may lack an understanding of how the company manages its liquidity and what levers it can pull to manage working capital. It also shows the value of accurate and timely Board reporting.

[Proposed changes to S&P's Local Government ratings methodology](#)

[LIBOR Reform: Are you ready?](#)

From our perspective, this serves as an opportunity to reiterate how and why liquidity management is so important. It serves as the “life blood” of all organisations and is (usually) the first thing to evaporate when times get tough.

[Adding value through centralising treasury management](#)

Liquidity management, in our view, is having access to liquid assets or committed debt facilities to meet projected contractual commitments (both expected and reasonably unexpected). Having a tailored and appropriate liquidity risk management policy is critical – simply adopting a metric you’ve seen at other organisations or holding an arbitrary ‘rainy day fund’ probably won’t cut it unless you’ve been super conservative. Separately, these can be moving feasts – reviewing and refreshing the liquidity risk management policy, to ensure that it remains fit-for-purpose is equally important.

Depending on your organisation and risk profile, there are typically three methodologies that companies will use:

- Fixed rate percentage: measuring liquidity as a percentage of projected peak debt amounts.
- Fixed amount: a dollar amount of liquidity amount that the company holds to cover unexpected operational and capital costs.
- Contractual costs: a variation on the above which commits to covering a defined term of contractual costs (e.g. wages, leases, payables, tax etc.). This approach is often adopted by companies that are growing strongly or have a large amount of variable costs (which change as revenues change).

The industry and risk profile of an individual organisation will be the primary driver of which approach is the most appropriate. Following that, the liquidity threshold amount that applies must then balance the financial strength of the company, the variability / predictability of cash flows and the risk tolerance of the Board.

Finally, the devil is usually in the detail. What is 'liquidity'? The definition itself is often one of the most important pieces. There are a number of ways that liquidity can be calculated (e.g. on a net or gross basis) and what is included (all financial assets or just 'liquid' assets?). If so, what is the definition of 'liquid'? As you can appreciate, all these things seems trivial... until they aren't – at which point it may be too late.

We are not trying to be alarmist, but we do want to stress that these are real questions each organisation should be thinking about on formal basis. It is also something that the credit rating agencies are paying more and more attention to (*see our related article below on Local Government credit ratings*). Education is equally important – management should ensure that the Board has a strong understanding of how liquidity is defined, measured and regularly reported to the Board.

Authored by Tom Lawson, tom.f.lawson@pwc.com

Winning the trust battle

The word "trust" has been mentioned widely in recent times particularly as it impacts the banking and insurance industries. A "Game of Trust" was the title given by Boston Consulting Group "BCG" in their 2018 [Corporate Treasury Insights survey](#), which provides insights on how global treasurers are reflecting on key stakeholder relationships. The messages are equally as important for treasurers in the New Zealand marketplace.

BCG seeks to define the Treasurer into morning and afternoon tasks. These tasks require different but similar needs and helps to define expectations, which ultimately enhances the trusted relationship sought by treasurers.

The morning Treasurer refers to transactional banking needs (e.g. transactional banking, cash flow, liquidity and risk management). Their expectations relate to data-enabled processes, low touch digital services leading to process efficiencies and productivity gains for routine treasury activities. This requires bank and service providers to differentiate themselves through characteristics such as agility, flexibility, responsiveness. Access to data is critical and banking/TMS partners need to capture and harvest the company data, extract the value, simplify and enrich the routine tasks quickly and with little fuss.

The afternoon Treasurer is defined by their long-term strategic needs. Economic risks, cyber risks and regulatory pressures as they relate to and impact the business are some of the factors considered. These treasurers want access to company and business insights and intelligence. Business, peer and sector insights are highly prized and valued.

So how does a banking, technology provider or adviser respond to these client expectations? Picking through the survey helps to understand and shape up the 'trusted adviser'. The characteristics of the trusted adviser is defined as follows;

- Demonstrate credibility, reliability and relationship excellence. Although today's complexities means a wider range of trusted advisers, each partner must exhibit these crucial attributes alongside deliverable capabilities, service levels and business knowledge.
- Treasurers want a stable, reliable and experienced partner. They seek proactive service and advice.
- Delivering value requires business expertise, deep industry and client knowledge, and transparency around pricing. Business understanding is mentioned as a major differentiator.

There are messages for the banks too. Respondents see banks as safe given they are highly regulated and institutionally robust. It was suggested that bank compliance and regulatory obligations are relationship positive and should be seen as a marketable asset. Treasurers viewed banks as an intrinsic part of their organisation with 65% stating a high level of trust. Partnering banks must help prioritise, share best practice and help efficiencies.

In summary, BCG defined trust as “[Inherent Trust] x [Delivery Excellence] x [Relationship Excellence]”

Authored by Brett Johanson, brett.a.johanson@pwc.com

RBNZ capital requirements: impact on businesses and treasurers

By now, most *Treasury Broadsheet* readers will be well aware of the bank capital changes being proposed by the Reserve Bank (RBNZ). Without restating the technical details of those proposals, we wanted to take a closer look at how we think the proposal process may play out and what the impact may be for businesses and treasurers.

The RBNZ accepts their proposal is prudent. Their comparative academic and international benchmarking analysis shows the lift in Tier 1 Capital to 16% is akin to protecting against a 1 in 200 year event risk. The RBNZ accepts this position as one where the potential impact on the economy (businesses, households, consumers) from a massive loss of confidence (worse than the GFC), more than offsets any potential increased costs, weaker credit growth and modest crimping of GDP growth. Furthermore, the RBNZ would err on the side of this trade-off still improving overall efficiency at a Tier 1 Capital ratio of *greater* than 16%. This means that while the RBNZ is seeking well thought consultation, there does not appear much room for negotiation.

In our view the RBNZ seems very determined to get the majority of these proposed changes into the banking system. Indeed, following the initial release of the discussion document and the ‘healthy’ push back from many commentators, it appears the RBNZ has gone on a ‘PR offensive’ to more clearly (and widely) communicate its stance and rationale (rather than *soften* that stance or rationale). On that basis, and noting that there is the chance for some aspects of the proposal to be softened ‘around the edges’, we believe the next 12-18 months will be characterised as follows:

Putting ourselves in the ‘banks’ shoes, we see several options on the back of the RBNZ proposals:

- Retain more earnings (i.e. reduce dividends repatriated to Australian parent) to bolster the capital base – reducing the dividend yield.
- Raise fresh equity through their Australian parent.
- Restrict credit growth and/or increase loan pricing to protect ROE on the larger equity base.
- Squeeze costs from other areas (such as reducing term deposit margins) to protect ROE.

The above list is not exhaustive but it illustrates several important points.

Firstly, we expect banks to take a close, hard look at all individual clients on a risk-weighted return basis. Banks will be forced to take a detailed holistic view of client relationships to examine those which are (and are not) providing a satisfactory return against the capital employed. We would expect banks to become more open to ‘walking away from a relationship’ if they see an opportunity to redeploy that capital more effectively. In this regard, businesses are susceptible to being squeezed given that the RBNZ’s risk weighting for corporates is higher than, say, an owner-occupied mortgage. This will ultimately be reflected in higher pricing for corporates.

Secondly, given the different levers available, and the reasonably competitive banking market, we consider banks adopting a balanced approach overall. The ultimate 'recipe' adopted by each bank will differ, but it's likely that some banks will see the changes as a chance to chase market share in certain markets/sectors, opting to reduce ROE over price increases (*when* the return equation makes sense). These dynamics should keep the eventual increase in lending rates below some of the headline figures being discussed in the media.

Lastly, based on historical evidence (such as the roll-out of loan-to-value restrictions), we would expect banks to move quickly to adopt the capital changes. While there is expected to be a five-year phase-in window, the banks are likely to quickly move to the new capital requirements once it becomes finalised.

Impact on businesses and treasurers

As mentioned above, we see these proposals pushing up bank corporate lending rates. Initial estimates range between 40 to 60 bps p.a. Secondly, we believe that the cost of committed undrawn 'stand-by' styled facilities may be hard hit – given that these typically are not drawn and the capital deployed by banks could be seen as under invested.

Lastly, while the banks have clauses in their documentation that would allow them to ratchet up fees at short notice due to “regulatory changes”, we think this is unlikely to happen. The risk of backlash is too high, and due to the five-year phase in, we expect the banks will wait until existing facilities mature, before re-evaluating the credit and pricing for corporate clients.

Impact on economy

It has been mooted that strong competition in the banking sector will limit the extent of cost increases. There is some risk that there is a 'shocked' impact that is widespread and all banks move quickly to the new regime.

There is also a suggestion that increasing domestic bank cost of funds (lower ROE) and lending margins will lead to the increased attractiveness of corporates issuing retail bond issues (lower cost relative to bank funding). This view has merit, however, we expect that before long wholesale investors will expect higher returns. The exceptions to this may be the US private placement market, due to a separate set of investor expectations.

Macroeconomic impacts include modestly weaker GDP growth and lower wholesale market interest rates (90 Day Bank Bill / OCR) relative to what would otherwise be the case – the lower interest rates serving to offset wider bank lending rates.

Authored by Chris Hedley & Tom Lawson, chris.m.hedley@pwc.com & tom.f.lawson@pwc.com

Proposed changes to S&P's Local Government ratings methodology

Standard & Poor's (S&P) global ratings have recently released a consultation document asking for feedback on proposed changes to the ratings methodology used to rate Non-US Global Local /Regional Government entities. – in the New Zealand context, this will impact our local government sector – i.e. councils and the LGFA.

The document was released on 13 February 2019 and the consultation period runs until 27 March 2019. S&P are encouraging councils and other interested parties to make individual submissions so that they can gauge the level and spread of interest in these changes.

The reason S&P are making the proposed changes is due to a cyclical review process, as well as a need to create a fit-for-purpose global standard that can be applied uniformly across all countries.

In our view, there are three key areas of focus that will likely impact the New Zealand local government sector and a number of other changes that are more administrative in nature. The three main areas of change are:

- (1) Re-scoping Budgetary Flexibility to now fall within Budgetary Performance;
- (2) A Contingent Liabilities Factor has now been included within the Debt Burden Factor; and
- (3) There have been some significant changes to how S&P measures Liquidity.

These areas are described in a bit more detail below, however this is not meant to be a comprehensive review of all proposed changes to the methodology.

Budgetary Flexibility

Under the current methodology, there are seven Factors (areas of assessment), contributing between 10-20% to the overall weighting (alongside the institutional framework). Under the proposed changes, two of these Factors have been merged in to other areas of assessment. The remaining five Factors have been allocated a weighting of 20% each (Economy, Financial Management, Budgetary Performance, Liquidity and Debt Burden).

Budgetary Flexibility is one of the Factors that has been removed under the proposed methodology. While the measure no longer holds an overall 10% weighting, it is still considered as part of the framework through an adjustment to the Budgetary Performance measure. That is, once the assessment of Budgetary Performance has been completed, qualitative adjustments will be made (positive or negative) for a number of areas including 'above' or 'below' average budgeting flexibility. This will generally only impact outliers – i.e. councils that are able to adjust or increase rates (positive), or cut spending, or those that do not have high levels of flexibility (negative).

S&P has (unsurprisingly) indicated that the impact of this change will vary from council to council depending on individual metrics. Critically though, any adjustment will happen *within* the ratings band (rather than *between* bands). Accordingly, any impact will remain incremental (i.e. could result in an outlook change).

Contingent Liabilities

Similar to Budgetary Flexibility, this has been removed as a Factor and will be considered as part of the Debt Burden assessment (increased weighting of 20%) under the proposed methodology. Contingent Liabilities in the New Zealand context is largely focused on the on-lending activity or guarantees (including issued and unpaid capital) that councils provide to their Council-Controlled Organisations (CCOs) and trading CCTOs (including other entities they support).

There will be an adjustment (again *within* the ratings band) for outliers rather than having a standalone assessment in this area. Under the proposed methodology, S&P will be combining the overall size of contingent liabilities along with a qualitative assessment on the risk that these contingent liabilities will materialise. So while a council may provide a large amount of on-lending, if that entity is highly likely to repay or can support the debt in their own right, the likely adjustment to the score will be low.

We also noted that under the proposed methodology liabilities relating to lease obligations will explicitly be included in the Debt Burden measure. S&P has included this in the past where the information is readily available, but have not explicitly separated it from other debt obligations. S&P has been fully consolidating the largest councils' group activities already. We understand that S&P's broad approach will be to NPV non-cancellable operating leases using the council's cost of borrowing as the discount rate. For leases longer than 3 years, the council's individual 3 year borrowing rate will apply.

Changes to Liquidity requirements

This was pointed out to us by S&P as possibly the most material area of concern in the New Zealand context. Globally, New Zealand has one of the highest local government debt burdens. However, this is supported by a very positively-weighted sector system for rates revenue and a robust sector framework which allows the sector to support this burden. Other jurisdictions tend to hold more assets to offset the burden whereas this is not generally seen in New Zealand.

While the ratio has not changed under the proposed methodology, the calculation has changed and S&P have highlighted to us that they will be focusing on the next 12 -18 months of debt serviceability. This translates to councils requiring either ready assets to support liquidity or a contract in place to raise debt (i.e. pre-funding through the LGFA) rather than just an *intention* or the *ability/capacity* to do so).

This is an area we will continue to focus on over the consultation period as it focuses on the alignment with current practices within councils, as well as the debt maturity profile of council balance sheets. It may also need to be reviewed in the context of existing Treasury Policies.

Overrides

There are a number of overrides that apply to the proposed methodology. Although these are present in the current ratings methodology we have observed some change in the way S&P wants to measure these moving forward.

One area in particular that has raised interest amongst high growth councils is the threshold of tax supported debt. Where tax supported debt is more than 500% of consolidated operating revenues, S&P is likely to lower the outcome by one notch.

Tax supported debt consists of direct debt, debt of non-bank Government-related entities (where councils will provide support in case of stress and/or if they require ongoing support under regular operating environment i.e. not stressed), guaranteed debt and debt of PPP's and securitisations (where the motivation is to achieve off-balance sheet treatment but this is not likely to transfer risk to private sector).

They would also seek to adjust a ratings outcome by one notch if the deficit after capital amounts is more than 25% of adjusted revenues.

Where both of these thresholds are breached, the outcome would be a downgrade of two notches. However, S&P would consider the credit profile compared with peers of similar performance and would reduce this to one notch where there was indication of a stronger credit profile.

These thresholds in the existing methodology are stated as “roughly 270%” and “roughly 23%” respectively. The definition of tax supported debt has not materially changed, just the threshold that would trigger a negative adjustment.

From S&P’s perspective, this change will have very little impact on the vast majority of New Zealand councils. Those councils with very high debt levels may be able to increase their debt marginally and remain within the current ratings band. S&P did caution that this would be assessed in the context of the serviceability of that lending – i.e. if more borrowing is taken out but the council has a strong ratings base (and ability to repay) or the debt is very long term, then raising additional debt would not necessarily trigger a downgrade.

In our opinion, the overriding impact of these changes should enable high growth councils (with larger growth economies) to achieve higher debt thresholds.

Conclusions

S&P has further indicated that, while the council assessment under the proposed methodology will be weaker overall, this will generally be at the margin. Any councils that will be materially impacted by changes to the ratings methodology will be contacted directly about their situation, however, once the changes have been adopted, these will become immediately effective. We therefore encourage councils to be aware of these changes and voice their opinions via submissions on the consultation document.

If you would like to discuss these changes with us from an independent point of view or if you would like a copy of the consultation document, please get in touch.

Authored by Sarah Houston-Eastergaard, sarah.j.houston-eastergaard@pwc.com

LIBOR Reform: Are you ready?

The London Interbank Offered Rate (LIBOR) is soon to be a thing of the past – expected to end in 2021. These changes are actually impacting all “IBOR” rates, in the US, Europe, Japan and elsewhere, but the term LIBOR is broadly used as a ‘catch all’.

The discontinuance of LIBOR and replacement with the Secured Overnight Financing Rate (SOFR) creates both challenges and opportunities for New Zealand corporate treasuries that have long dated derivatives such as cross currency / interest rate swaps and foreign currency denominated debt.

Delaying preparation could lead to economic and operational impacts.

While panel banks have agreed to continue their contributions to LIBOR until the end of 2021, the financial benchmark linked to more than \$350 trillion of financial assets will take substantial effort and time to replace. Businesses currently using LIBOR as a reference rate should therefore begin taking action now to prepare to move to an alternate benchmark.

Why does it matter to me?

Moving away from LIBOR gives rise to challenges around managing debt, interest rates and liquidity, operations, accounting and tax procedures. In general, the key aspects are being impacted as follows:

Debt management: Current reference rates for existing loans/facilities will become invalid. This mainly focuses on external debt funding, however, transfer pricing issues may also arise if intercompany funding or other agreements are not appropriately modified.

Interest rate management: The underlying reference rate on instruments needs to change. Going further, differences in transition provisions (between debt, cash products and derivatives) may create basis risk. Existing cross-currency basis instruments referencing two floating rates may create challenges.

Liquidity management: LIBOR instruments may be more difficult to liquidate as market demand declines as 2021 approaches. Increases in settlement risks may arise due to volatility in SOFR and uncertainty around the availability of forward-looking tenor rates.

Operations: Complexities may arise around sourcing and applying new benchmark rates to discount curves. Contracts outside of treasury including procurement, supply chain and revenue that reference LIBOR will also need to be assessed for review. The impact of the above risk management factors could also be impacted by the operational process and systems used.

Accounting and Tax: Changes to reference rates may have accounting and tax consequences.

What should I be doing now?

Identify debt and derivative contracts linked to LIBOR, review terms and understand what your existing counterparties are already doing. Most of the work to get compliant will fall on the banks (changes to ISDA documentation), so talk to your bank counterparties to get their view and action plan. Determine where there might be inconsistencies across your banking products and re-negotiate contracts where needed.

Analyse potential SOFR (or other benchmark rate) exposures, and develop appropriate transition and hedging strategies. Actively monitor the rate market to ensure optimal timing of transition to an alternate rate.

Identify all other contracts across the organisation that reference LIBOR, assess impacts and make changes to systems as required.

Understand the potential materiality of accounting/tax implications resulting from LIBOR reform.

Authored by Georgia Bowers, georgia.r.bowers@pwc.com

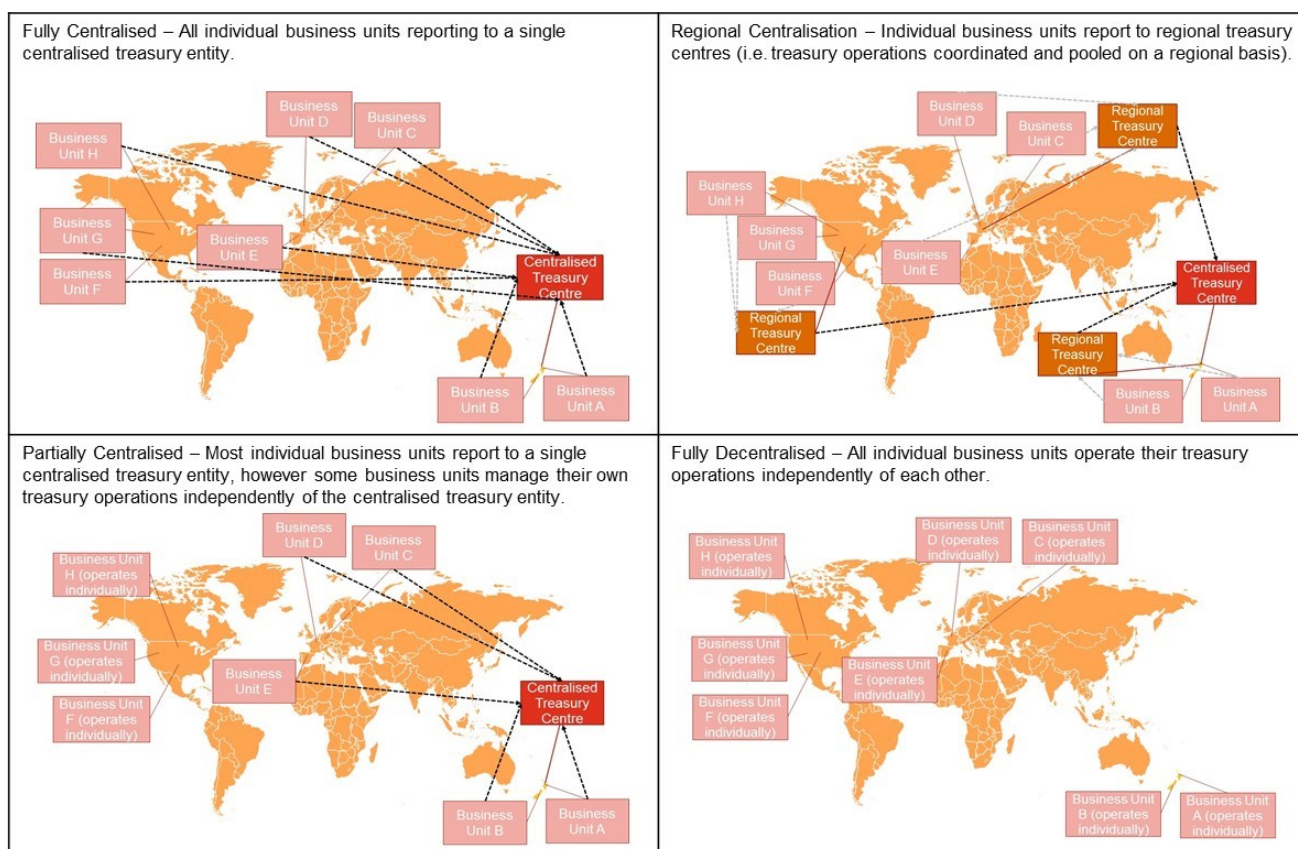
Adding value through centralising treasury management

The rapid pace of globalisation over the past two decades has resulted in a growing number of businesses operating across a range of different geographical locations. Accordingly, these organisations are increasingly exposed to new and varied treasury exposures. This article discusses some of the advantages and disadvantages associated with centralising treasury management practices.

What is centralised treasury management?

Centralised treasury management is the practice of consolidating treasury units and services. Rather than discrete levels, the extent to which a business centralises its treasury practices exists on a spectrum between 'fully centralised' and 'fully decentralised'. Businesses where there is a single, unique treasury centre are at the 'fully centralised' end of the spectrum, whereas businesses operating with completely independent business units are at the 'fully decentralised' end. However, for simplicity this article will focus on the most common centralised structures (diagrams outlining the structures displayed below):

Common centralised structures



Source: *The Structure Role and Location of Financial Treasury Centres* (KPMG)

What are the advantages of centralising treasury management?

Centralising treasury management enhances liquidity, cash and funding management by allowing individual businesses to ‘pool’ financial resources across centralised treasury units (i.e. regional treasury centres). Cash ‘pooling’ allows business units with strong cash positions to offset other units who have weaker cash positions (i.e. those relying on working capital facilities). By utilising cash reserves across the business, organisations can minimise the use of external working capital facilities, which are often costly. Cash ‘pooling’ can also reduce the number of individual bank accounts required, which can both streamline accounts and provide lower banking costs. From a liquidity perspective, the same principle applies, with liquidity buffers able to be utilised across the different business units. Further, treasury centralisation enables organisations to borrow funds on a consolidated group level (regional or global), which often enables individual business units to achieve a lower cost of borrowing.

Another advantage of centralised treasury management is the increased transparency over the entire organisation. The centralised structure will typically require all business units (operating within the structure) to adhere to common treasury practices and reporting requirements. Accordingly, the central entity has visibility over the performance of individual business units, as well over the consolidated group. This improves an organisation’s ability to identify, and then address, underperforming business units and group risks. Further, the extra visibility provides organisations access to a greater quantum and quality of data, which can be leveraged to improve business performance. Finally, from a governance perspective, treasury centralisation enforces global treasury practices across the whole organisation, which promotes better overall treasury management. Individual business units that are operating below the organisation’s standards are easily identifiable, and can therefore be managed more closely if required.

Centralised treasury management also promotes economies of scale, which should lower associated costs. Organisations can often access treasury software (i.e. treasury management systems) at a lower

average cost, and timing consuming tasks can be undertaken once, at a consolidated level, rather than multiple times across each business unit. Further, professional advice can be shared across the individual business units, with individual business units splitting the costs. This improves the access to quality advice, and regularly lowers the overall cost of professional advice across the organisation. Associated with this is an organisation's ability to utilise particular financial structures (i.e. tax pooling), which may not be available to individual business units.

What are the disadvantages of centralising treasury management?

For all the benefits, there are some disadvantages associated with centralising treasury management. Firstly, business units may be highly heterogeneous (i.e. different cultures, structures, processes), and therefore ill-suited to a 'one-size-fits-all' approach. Many of the advantages of centralisation, particularly in regards to governance, consistency of reporting, time saving and economies of scale, rely upon the homogeneity of individual business units, or at least data and process. Business units in different locations may operate very differently according to the respective cultural or regulatory/legislative conditions in the region, which will limit the homogeneity of business units (note in these circumstances regional centralisation is often preferable). Further, there may be a specific reason for a business units' financial performance, or way they operate, which may be overlooked when centralising treasury functions. In these cases, the local knowledge of treasurers operating at a business unit level is invaluable, and unlikely to be obtainable when centralised. Where particular business units are especially heterogeneous, a partially centralised approach will be beneficial, which enables those particular business units to operate individually from the centralised treasury entity.

There can also be a significant cost (particularly upfront) attached to the technology/software required to operate in a centralised treasury structure. Whilst these costs are split across the whole organisations (which is a benefit of centralisation), the overall cost may inhibit companies lacking the necessary funding. For smaller organisations, these costs can be proportionally very large, and therefore become highly restrictive. Further, all personnel involved in treasury management (within the individual business units and at a consolidated group level) will need to have the necessary skills and training to operate any new technology/software. Upskilling personnel can present financial and operational changes, which can inhibit treasury centralisation.

Finally, centralisation will increase the interdependence of individual business units on each other. Cash 'pooling', centralised financing and other practices associated with centralisation tie financial outcomes of different business units to each other. Accordingly, if one business unit starts to underperform, it can translate across the entire organisation. The interdependence is particularly problematic when an individual business unit becomes insolvent, regularly presenting major disruptions to other business units.

Conclusion

There are a number of advantages associated with centralised treasury management, especially related to governance, cost savings and other efficiencies. By consolidating individual business units, organisations can combine financial resources to maximise an organisation's balance sheet to enhance cash, liquidity and funding management. Further, organisations can exploit the benefits of economies of scale to lower the average cost associated with treasury management. However, a centralised treasury structure is not appropriate for all organisations, with high technology/software costs and a lack of heterogeneity presenting the two largest limitation. In order to maximise the benefits of centralisation, organisations should carefully consider the synergies between each business unit, and evaluate which centralisation style would be most suited.

Authored by Nathan Green, nathan.d.green@pwc.com

Get in touch



Stuart Henderson
Partner
T: +64 21 343 423
E: stuart.r.henderson@pwc.com



Brett Johanson
Partner
T: +64 21 771 574
E: brett.a.johanson@pwc.com



Chris Hedley
Executive Director
T: +64 21 479 860
E: chris.m.hedley@pwc.com



James McHardy
Consultant
T: +64 21 263 4282
E: james.c.mchardy@pwc.com



Alex Wondergem
Director
T: +64 21 041 2127
E: alex.j.wondergem@pwc.com



Tom Lawson
Associate Director
T: +64 27 421 0733
E: tom.f.lawson@pwc.com



Sarah Houston Eastergaard
Manager
T: +64 21 892 618
E: sarah.j.houston.estergaard@pwc.com



Tom North
Treasury Advisor
T: +64 21 154 4423
E: tom.o.north@pwc.com



Ollie McDowell
Manager
T: +64 21 137 6491
E: ollie.a.mcdowell@pwc.com



Matt Stewart
Treasury Analyst
T: +64 21 847 930
E: matt.j.stewart@pwc.com



Rajeev Verma
Treasury Analyst
T: +64 21 024 86011
E: rajeev.c.verma@pwc.com



Georgia Bowers
Treasury Analyst
T: +64 21 025 25992
E: georgia.r.bowers@pwc.com



Nathan Green
Treasury Analyst
T: +64 21 874 361
E: nathan.d.green@pwc.com

[pwc.co.nz /corporate-treasury-advisory-services/](http://pwc.co.nz/corporate-treasury-advisory-services/)

© 2019 PricewaterhouseCoopers New Zealand. All rights reserved. PwC refers to the New Zealand member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. Please see www.pwc.com/structure for further details.

This publication is subject to the following restrictions. This publication should not be reproduced or supplied to any other party without first obtaining our (PwC New Zealand) written consent. We accept no responsibility for any reliance that may be placed on its content should it be used for any purpose other than that set out below and in any event we will accept no liability to any party other than you in respect of its contents.

The purpose of the publication is to provide our current financial market views and opinions. The statements and opinions contained in this report are based on data obtained from the financial markets and are so contained in good faith and in the belief that such statements, opinions and data are not false or misleading. In preparing this publication, we have relied upon information which we believe to be reliable and accurate.

We reserve the right (but will be under no obligation) to review our assessment and if we consider it necessary, to revise our opinion in the light of any information existing at the date of this publication which becomes known to us after that date.