UBS

UBS response to the Networks NSW request for financeability analysis following the AER Draft Decision of November 2014

Summary

Consistent with the AER approach used in the draft decision for each of the Networks NSW businesses (Ausgrid, Endeavour Energy and Essential Energy) released in November 2014, we have used a fundamental or bottom up approach to review the debt management practices of each of the businesses and the impact that those practices have had on submissions for the next regulatory period 2014-2019.

Our approach was to look back at the 2009 determination and the decisions made by Networks NSW following that determination and then how those decisions influenced their submissions for the 2014-2019 regulatory period in regard to the cost of debt. We then looked forward following the release of the November 2014 AER draft decision – examining the financeability of the businesses in domestic and offshore capital markets and the costs associated with hedging debt raised in the various markets.

The process used was as follows:

1. Conduct a relative merits analysis by looking at the decision of the Networks NSW businesses not to hedge the interest rate risk component of the cost of debt for the 2009 averaging period;
2. Outline a cost benefit analysis – based on 2009 data – of the decision to either hedge interest rate risk during the averaging period or alternatively follow a trailing average approach to funding and hedging risk;
3. Review the impact of the trailing average approach adopted in 2009 and its impact on the Networks NSW 2014 AER submission;
4. Examine the credit spread component of the cost of debt calculation together with access to domestic and offshore debt capital markets for the Networks NSW businesses following the release of the November 2014 draft decision;
5. Examine the implied credit metrics based on current forecasts for revenue, debt, capex and opex and their capital structure and ratings implications; and
6. Price the transaction costs associated with hedging debt – given access to both Australian debt capital markets and offshore markets where the proceeds are swapped back into AUD.

LOOKING BACK

Relative merits

The key question to ask is whether the Networks NSW businesses could or should have hedged the interest rate risk component of the cost of debt associated with the 2009-2014 regulatory period ?

The AER draft decision for the Networks NSW businesses of November 2014 made the following observations (in summary):

- The AER accepted a 40 business day averaging period under the on-the-day approach for the 2009-2014 regulatory determination;
- The AER was not satisfied that a benchmark efficient entity with similar risks faced by Networks NSW would not have hedged at all – estimating that service providers could have hedged over a 60-80 day period;
- The estimated 60-80 day hedge period may have been overstated because it was based on Networks NSW current asset base rather than their asset base at the start of the last regulatory period;
- Activity in Australian dollar-denominated single currency interest rate derivatives is quite liquid.

We make the following comments:

- The estimates made by UBS in "UBS response to the Networks NSW scoping request on debt restructuring costs" (October 2013) in regard to Australian interest rate derivative market liquidity and the period of time necessary to hedge Networks NSW debt related to the 2014-2019 regulatory period only and not to the previous regulatory period.

- In relation to the 2009-2014 regulatory period and specifically the 2009 determination, we note the following:

    - While the AER accepted a 40 business day averaging period for the 2009-2014 regulatory determination, the Australian Competition Tribunal set 15 business days as the appropriate averaging period. This decision was accepted by the AER and the period of 18 August to 5 September 2008 was used to set the cost of debt;

    - The Australian Competition Tribunal set the averaging period of 18 August to 5 September 2008 in November 2009. There is no derivative product available to hedge historical interest rates;

    - Putting to one side the practicalities of hedging rate risk for a period some 15 months in the past, it is instructive to review the liquidity in the Australian derivatives market around the time of the Lehman Brothers collapse in September 2008 and over the course of the next year in the period up to the Australian Competition Tribunal decision in November 2009.

    - The median standard transaction size for interest rate and cross currency swaps in January 2009 was A$50m[1].

      "Most respondents reported a significant deterioration in liquidity conditions over the preceding 18 months. In particular, it has become noticeably more difficult to find a counterparty, the standard transaction size has fallen sharply across products, and the price impact of even a standard-sized transaction has increased considerably."[2]

    - The AFMA 2009 Australian Financial Markets Report shows AUD interest rate swap annual turnover to be $1,561,178 million[3]. This equates to a $5,988m per business day[4]. Turnover by Survey Respondents declined 12.4% while turnover by other banks declined 20.5% over the previous year. We note from the AFMA Australian Financial Markets Report 2008[5] that swap outstandings for a term of 5 years and greater accounted for 14.4% of total outstandings. If we assume that swap outstandings are a reasonable proxy for swap turnover for a particular maturity, then the AFMA measured average daily turnover for interest rate swaps for terms of 5 years or greater in 2009 was of the order of $862m.

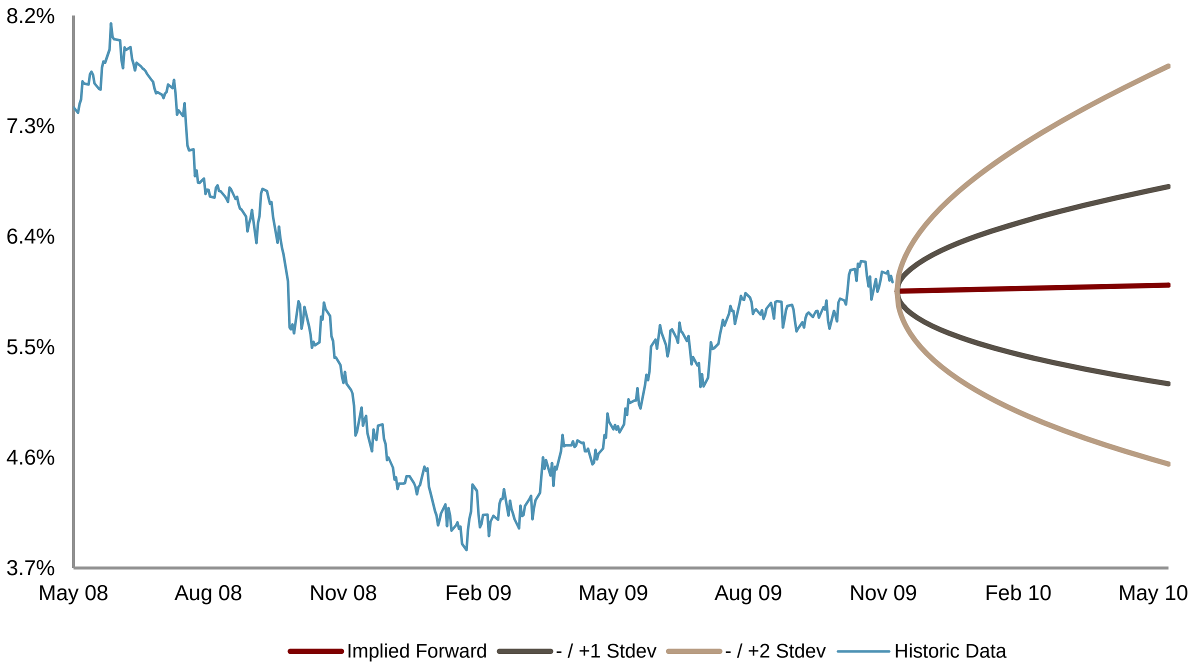
    - The notional debt for Networks NSW at the time of the 2009 determination was $9,801m (equivalent to 60% of RAB at that time). Actual debt was $10,040m. TransGrid, TasNetworks and ACTEWAGL had notional debt totaling $3,461m and were subject to the same timing in regard to determination and cost of debt specifically. The total on the day notional debt amount for the service providers subject to a determination at that time was $13,262m. However, over the term of the 2009-2014 regulatory period the appropriate hedge amount was $18,263m i.e. the average notional debt amount for each entity over the period. The quantum at risk at the time was the forecast notional debt over the full regulatory period for all entities. Based on the median standard transaction size at the time of $50m, the total hedge requirement for Networks NSW, TransGrid, TasNetworks and ACTEWAGL represented 365 times the standard transaction size. It is reasonable to assume that the service providers may, at that time, have transacted up to $200m of fixed rate interest rate swaps per day without causing market dislocation or exhausting available liquidity. On that basis, the total notional debt amount may have been hedged in 91 business days. We regard that as an aggressive assumption in the context of a median transaction size of $50m and daily market turnover of $862m at that time.

- We regard any requirement to hedge outside of an averaging period as an unacceptable risk as it exposes the entity to potential material loss. UBS analysis in regard to the 2009-2014 regulatory period measured the degree of risk and the potential cost and volatility associated with fixed rate risk outside of averaging periods. Risk was measured based on swap rate data in November 2009 (at the time of the Australian Competition Tribunal decision) on a one and two standard deviation basis in the same way that we measure credit risk for all derivative counterparties. We used that data to measure the quantum of risk associated with an estimated hedge period of 91 business days versus an averaging period of 15 business days in 2008 as determined by the Australian Competition Tribunal and used by the AER. The approach that we used was as follows:

  - We assumed that all service providers hedged the maximum amount possible of $200m per day for 15 consecutive business days – that is, $3 billion of the total requirement. The remaining hedge requirement was then $15,263m over a 76 business day period (i.e. $18,263m - $3,000m). Each 1 basis point shift in fixed rates for this notional amount over a 5 year term was worth $7m (DV01).

  - Credit risk is measured on a two standard deviation basis. Applying that same two standard deviation measure for the change in fixed rate for a 3-month calendar period past the 15 day averaging period implied risk of 125.8bp[6]. Assuming a value per basis point of $7m, this implies potential risk at the time of $881m. NSW service providers accounted for 93% of all notional debt subject to determination at that time. The adjusted potential risk applicable solely to NSW service providers was therefore **$819m**.

In summary, any requirement to hedge interest rate risk outside of an averaging period created a risk position. We have quantified that risk – in the case of NSW service providers – at $819m.



Source: UBS, Bloomberg, Australian dollar 5 year interest rate swap rates

	Spot (16-Nov-09)	1 week	1 month	3months

1 Standard dev.	5.905	6.065	6.240	6.502
2 Standard dev.	5.905	6.229	6.594	7.163

Source: UBS, Bloomberg, Australian dollar 5 year interest rate swap rates

The November 2014 draft decision for the Networks NSW businesses draws conclusions with regard to liquidity and the ability of service providers to hedge interest rate risk for the 2009 determination by reference to "Australian OTC Derivatives Market Activity", October 2012 prepared by the RBA. The report uses data as at June 2012. We see no relevance in this document as a measure of market liquidity for either the 2009 or 2014 determination. The UBS analysis – by way of contrast - has been based on AFMA data in 2009 in order to review liquidity and the ability to hedge risk at that time. The impact of the Lehman Brothers default in September 2008 – around the time of the NSW service providers' averaging period - had a material impact on market liquidity that was not relevant some 3 years later in 2012.

"While the Australian OTC derivatives market generally remained robust to the turbulence that followed the bankruptcy of Lehman brothers in September 2008, there was widespread uncertainty among participants. This contributed to an increase in price volatility and deterioration in liquidity conditions across products"[7].

In the interests of clarity, we have reconciled the derivative markets activity data in 2012 with the AFMA data in 2009. It is worth noting that the RBA data is drawn from AFMA and other sell-side and buy-side institutions. We had estimated – based on the 2009 AFMA data – that the average daily turnover of interest rate swaps with a term of 5 years or more was $862m.

The data indicated that over the year to end June 2012, OTC interest rate derivatives (both single currency and cross currency) turnover was $65b. Of this amount, daily turnover in Australian dollar denominated single currency interest rate derivatives accounted for $50b. Further, of this amount, 75% was inter-bank related, leaving $12.5b to account for corporate related hedging, traditional fund managers, hedge funds, CTAs, Government and offshore central banks. Previous AFMA Australian Financial Markets Reports[8] show that the corporate related hedging (from survey respondents and other banks) accounts for ~70% of the non-interbank / in-house transactions. Therefore non-interbank hedging turnover – across all tenors – for counterparties that were not traditional fund managers, hedge funds / CTAs, Government or offshore central banks - accounted for $8.75b (i.e. $12.5b x 70%).

Previous AFMA data had shown that outstandings for a term of 5 years or more accounted for 14.4% of total volume outstanding[9]. Applying that same logic would show that in 2012 the daily corporate related turnover for AUD interest rate swaps for a term of 5 years or more was $1,260m (i.e. $8.75b x 14.4%). Daily turnover of $1,260m in 2012 is consistent with turnover of $862m per day in the year post the Lehman Brothers default.

We note that 2.5% of turnover relates to terms of 10 years or more – equivalent to daily turnover of $220m.

We conclude that a decision to hedge a component of the cost of debt calculation by using interest rate swaps in 2008/2009 would not have been achievable for Networks NSW over the 15 day period set by the Australian Competition Tribunal and implemented by the AER. The maximum averaging period of 40 days – while not implemented – would still not have been sufficient to hedge the fixed rate risk component of the cost of debt determination. Interest rate swap liquidity at the time was uncertain at best. A partial hedge may have been achievable, but it would also have exposed the NSW service providers to potential risk of $819m. No compensation was made available to cover risk outside of the averaging period. The low risk and efficient alternative was to adopt a trailing average strategy to hedge interest rate risk.

UBS

Trailing Average

A hedge of the cost of debt determination in 2009 would not have been possible for the following reasons:

1. As previously reviewed, the Networks NSW businesses were not able to hedge the interest rate risk component of the cost of debt determination within the averaging period. The risk has been estimated at $819m for all NSW service providers if a decision had been made to hedge risk outside of the averaging period based on interest rate volatility at that time; and

2. A hedge of the interest rate risk component – even if it was achieved - could only ever be considered a partial hedge - unless the credit spread component was hedged also at the same time. The only way to hedge credit spread risk i.e. the debt risk premium (DRP), would have been to issue the total notional debt amount of $9,801m for the Networks NSW businesses during the same averaging period of 18 August – 5 September 2008. Putting to one side that the averaging period was decided by the Australian Competition Tribunal in November 2009 and that debt cannot be issued in the past, we note that there was no corporate issuance in the Australian domestic debt market in the immediate aftermath of the Global Financial Crisis. Total domestic issuance in 2009 was $2.4b. There was no capacity in the Australian debt capital markets to hedge the credit spread component of the cost of debt calculation for the Networks NSW businesses in 2008 / 2009.

With a mandated averaging period of 15 days in 2008, an inability to hedge the interest rate risk component in that time period and a domestic debt market that was closed in the immediate aftermath of the Lehman Brothers default, the Networks NSW businesses had no access to hedge the cost of debt i.e. the interest rate risk and the credit spread. In 2009 the low risk efficient alternative for the Networks NSW was to implement a trailing average strategy

The trailing average approach implemented by Networks NSW resulted in fixed rate debt issued throughout the 2009-14 regulatory period as financial markets allowed. With interest rates falling since the 2008 averaging period closed, Networks fixed rate debt issuance has moved out of the money when measured against the current spot 10 year fixed rate. The current impact of the trailing average issuance program is reflected in the cost of debt submission for each Networks NSW business when compared with the current spot rate 10 year fixed rate cost of debt:

	2014-19 Ausgrid proposal	**2014-19 AER draft decision**
Nominal risk free rate	4.78%	3.55%
Nominal pre-tax return on debt	7.98%	6.51%

	2014-19 Endeavour proposal	**2014-19 AER draft decision**
Nominal risk free rate	4.78%	3.55%
Nominal pre-tax return on debt	7.98%	6.51%

	2014-19 Essential proposal	**2014-19 AER draft decision**
Nominal risk free rate	4.78%	3.55%
Nominal pre-tax return on debt	7.98%	6.51%

The trailing average approach used by Networks NSW was consistent with debt management strategies adopted by non-regulated entities in the infrastructure sector – ports, airports, roads and railways.**

LOOKING FORWARD

Cost of debt

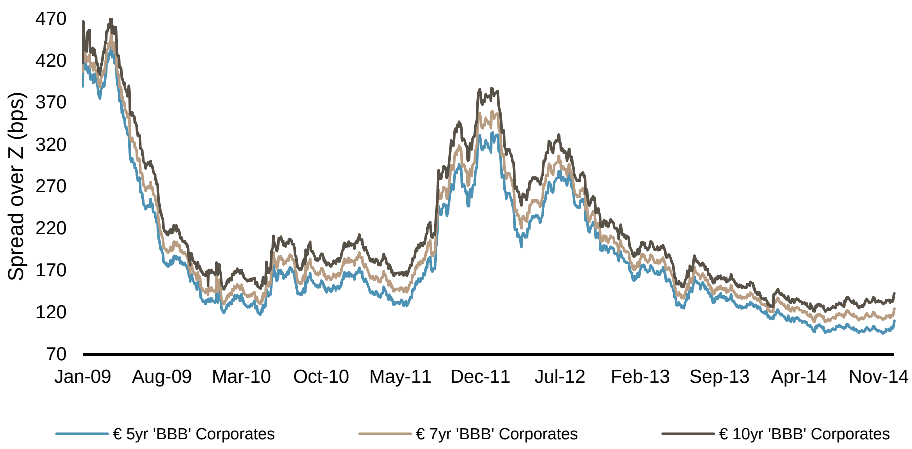
We have approached the assessment of the ability of Ausgrid, Endeavour, Essential Energy to access debt capital markets from a pricing, tenor and volume perspective initially on the assumption that each entity is rated BBB+ consistent with a benchmark efficient entity. The analysis draws upon data looking at the last five years of issuance for BBB rated corporates across global markets, with a focus on the domestic Australian institutional market. We have then briefly looked at the financial cost the Networks NSW businesses in the event that a public or private rating is obtained that is less than that associated with a benchmark efficient entity.

Pricing—BBB-band corporate issuance

Corporate 'BBB' credit spreads have materially reduced since 2008 / 2009 when they were significantly affected by the Global Financial Crisis (GFC). For Australian corporates, market access proved difficult during these times with no issuance in the immediate aftermath of the GFC in 2008, with the domestic AUD market completely closed and only supporting $2.4b of domestic issuance in 2009. During this difficult period it was only the USD market that provided sufficient depth for issuers to raise debt capital in larger amounts and was typically reserved only for A-band or strong-BBB corporates.

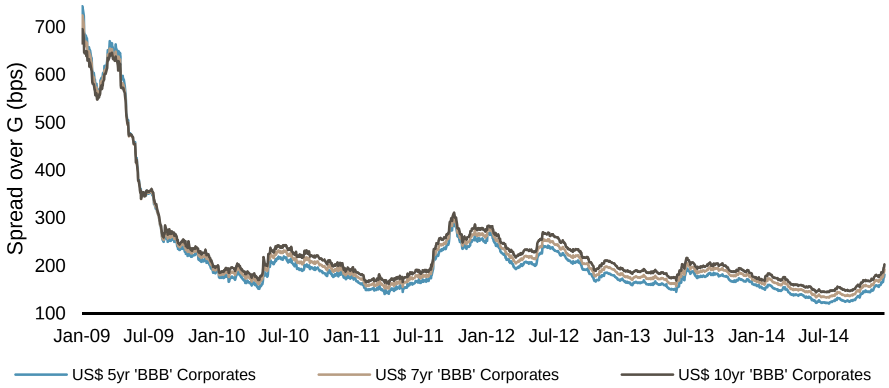
Spreads peaked again towards the end of 2011 / early 2012 and again in mid-2012 driven by the Eurozone credit and subsequent sovereign crisis in addition to Greek Eurozone exit concerns. The impact of these events is more clearly depicted on the € 'BBB' corporate spreads graph below. Over the past year the global search for yield driven by global quantitative easing programmes has supported a contraction in spreads to historical lows across currencies for 'BBB' band credits.

€ 'BBB' corporate spreads



Source: UBS Delta

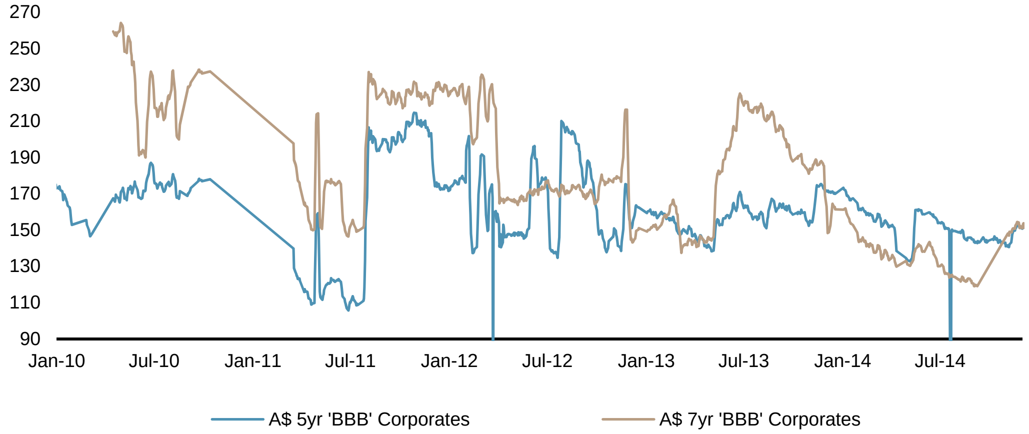
USD 'BBB' corporate spreads



Source: UBS Delta

AUD 'BBB' corporate spreads

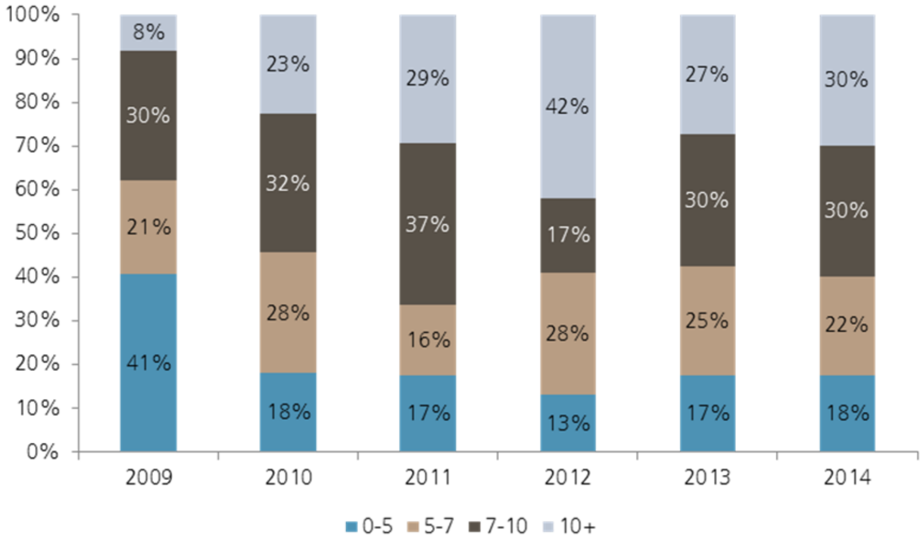
The Australian corporate market is relatively small compared to the aforementioned Euro and USD markets. As such, new issues are more likely to skew the index. As with the Euro and USD market, domestically we have seen a steady contraction in spreads since the GFC and widening in the market in line with offshore political events. The story in the domestic market in the past 2 years however has been positive with corporates taking advantage of a relative lack of supply to achieve tighter pricing, larger volumes and less onerous covenant structures (in line with the Euro market).



Source: Bloomberg, UBS

Tenor—Australian corporate historical issuance

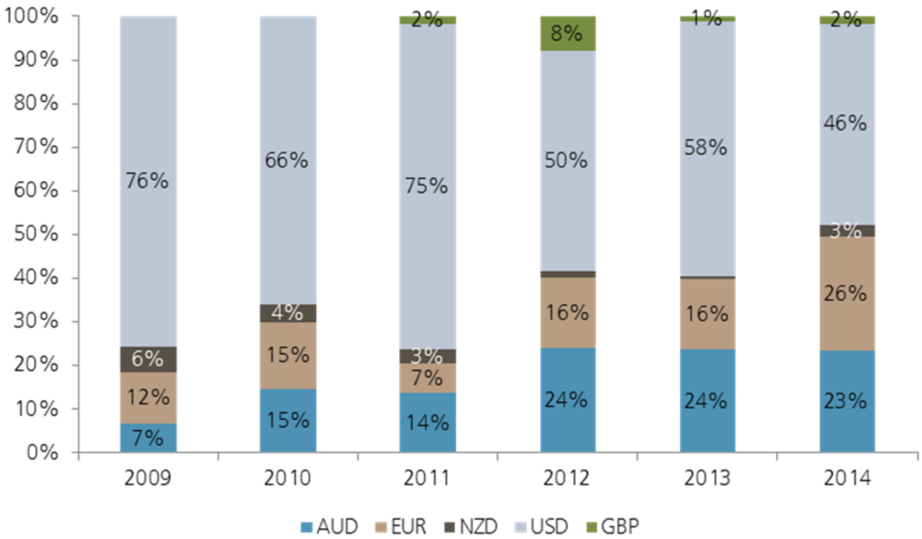
Australian corporate issuers have been able to benefit from the current global low yield environment by achieving longer dated transactions as investors seek higher yielding investments. Over the years, investors have become more supportive of longer dated transactions in order to achieve yield targets. The graph below depicts the lengthening of tenor for Australian corporates in the global debt capital markets, with the tenor sweet-spot moving from 0-5yrs in 2009 to 7+yrs in 2014.



Source: UBS, Dealogic

Market trends

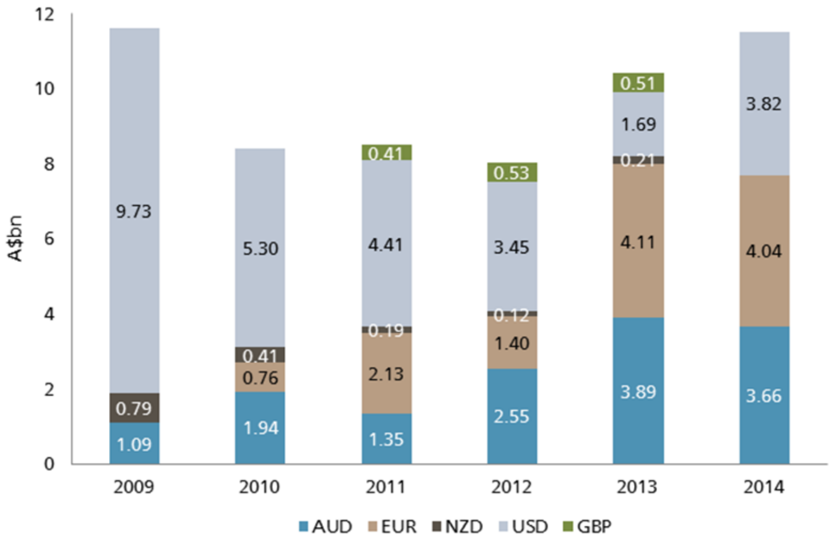
The Australian corporate domestic debt capital market has developed significantly since the GFC - reaching a highpoint for debt issuance of ~$14b in 2012 before falling away some 30% to $10b in 2014. In 2009, most Australian corporates looked to the US market in USD Private Placement (USPP) and 144A formats to fulfil their funding needs as these markets offered the deepest pools of liquidity. Australian corporates are increasingly looking to issue offshore. The percentage of USD issuance has progressively declined in recent years in favour of the Euro market, which offers issuers the ability to adopt less onerous financial covenants, achieve similar size to the US market and access cheaper funding costs (lower spreads and legal costs). The graph below depicts the rise in the use of the Euro market in particular since 2011.



Source: UBS, Dealogic

Volume—Australian corporate BBB-band historical issuance

The AUD market has become increasingly supportive of BBB-band issuance. Traditionally, issuers on the lower end of the credit spectrum have looked to the US markets for support, however as the market has developed, Australian corporate BBB-band issuers have been better supported. This is represented in the graph below which highlights the percentage of AUD BBB-band issuance increasing over the last 5 years. Over time, the amount raised by BBB-band issuers has also increased in the Euro market which has been a general trend over the past 2 years given favourable market conditions



Source: UBS, Dealogic

Much of this cost of debt analysis has focused on stronger investment grade Australian corporate issuance. It should be noted that borderline investment grade risk found some support from Australian investors in 2014 with the following notable examples:

- **Alumina (BBB-)** issued their inaugural domestic transaction in 2014, a A$125m 5-year at swap +245
- **DBNGP Finance (Baa3/BBB-)** issued a new 6-year $100m bond at swap +160 adding an additional data point to their AUD domestic curve which brings their total lines outstanding to 8.

Nevertheless, access to debt capital markets has typically been more difficult for BBB- issuers - although the recent issuance by Alumina and DBNGP Finance marks some development on this front. Issuers at this rating typically need to provide financial covenants and in all cases coupon step-ups such that investors are compensated should ratings fall to sub investment grade (typically 100-150bps step-ups from BBB- to BB+). Issue sizes have typically been small, ~$125m and tenors are shorter, achieving no greater than 6 years.

The USD private placement market has traditionally been more supportive of low-BBB rated issuers. There was some $16.8b of issuance from Australian corporates into this market in 2014. Typical issue sizes range from $200-300m Tenor sizes are longer in this market - with 7-15 years being common throughout 2014.

Volume—Australian corporate sub investment grade[10] issuance

In 2014 there was one sub investment grade issuer in the Australian debt capital markets. The Qantas (Ba2/BB+) transactions (A$300m 8yr priced at swap +400 and A$400m 7yr priced at swap +385) highlighted some appetite of investors for higher yielding, sub-investment grade transactions. This is particularly significant in the domestic market as Australian investors have traditionally been more conservative and reluctant to support sub investment grade risk.

The USD private placement market is traditionally an investment grade market and is effectively closed to large scale, long term sub investment grade issuance. Sub investment grade issuance (NAIC-3 rated entities) is ~1.5% of the volume associated with investment grade issuance (NAIC-1 / NAIC2).

Sub investment grade issuers traditionally target issuance into the US High Yield and US Term Loan B markets.

NSW service providers could not fund their debt requirements nor fix their cost of debt on a benchmark efficient basis unless rated BBB or higher. A rating less than BBB would result in higher cost of debt, restrictive covenants, less liquidity and higher hedging costs.

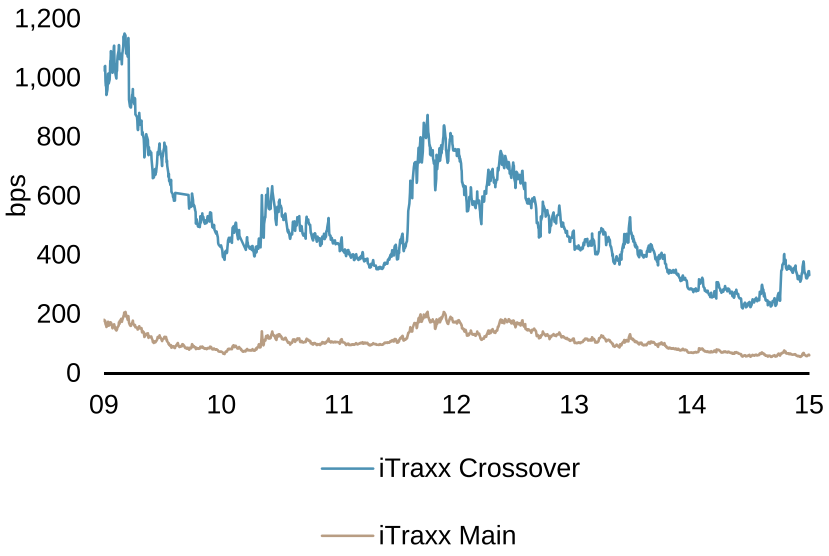
Credit metrics

The Standard & Poor's confidential credit assessments for Ausgrid, Endeavour Energy and Essential Energy have been made available to us. We note the following:

[CONFIDENTIAL]

We are able to measure with some accuracy the debt cost differential between investment grade and sub investment grade credit risk by comparing the Markit[12] iTraxx Main Europe index (comprising 125 equally weighted credit default swaps on investment grade European corporate entities) with the Markit iTraxx Europe Crossover index (comprising 75 equally weighted credit default swaps on the most liquid sub-investment grade European corporate entities). In 2014 the average differential between the Markit iTraxx Main Europe index and the Markit iTraxx Europe Crossover index was 217.8bp. We note that this is for a term of 5-years. This is effectively the debt cost differential between investment grade and sub investment risk for European corporates. There is no equivalent benchmark available for Australian corporate issuance.

Assuming a Networks NSW notional debt amount at June 2014 of $15,993m (60% of RAB) we are able to calculate the cost of debt differential between a benchmark efficient entity and one rated sub investment grade. Using the Markit iTraxx Europe differential of 217.8bp - calculated as a daily average over the course of calendar 2014 and assuming a 5-year term, the cost differential for Networks NSW of being rated BBB+ and sub investment grade is **$1.6 billion** (i.e. DV01 of $7.385m x 217.8bp). Note that if we use actual debt rather than notional debt, the differential is $1.73 billion.



Source: Markit, Bloomberg

[CONFIDENTIAL]

The AER has defined a benchmark efficient entity as a service provider with a credit rating of BBB+.

UBS

Cost of hedging for the 2014-2019 regulatory period

We understand that the AER did not explicitly provide an allowance for transaction costs associated with hedging debt issuance into either an AUD fixed rate or from a foreign currency back into AUD. We will not comment on this issue in regard to past determinations other than to make two observations:

1. We note references in the recent AER Draft Decision to the cost of hedging as being insignificant[13].

2. The Networks NSW businesses had no ability to hedge interest rate risk within the term of the mandated averaging period of 18 August – 5 September 2008 or the maximum averaging period that may have been available at that time. We have measured the risk associated with a hedge outside of the mandated averaging period to be $819m for all NSW service providers. With no domestic debt issuance in the Australian debt capital markets in the period immediately after the averaging period over the remainder of 2008 and only $2.4b of issuance in 2009, it is reasonable to assume that liquidity and appetite to take and hold corporate risk was constrained at that time. Given the liquidity and credit risk constraints at the time, we are not able to accurately quantify the cost of hedging some $18,263m of notional debt (total notional debt amount for all service providers subject to determination in 2009).

We will focus the remainder of our comments on the Networks NSW cost of hedging for the period 2014-2019.

We note the following:

- AusNet is one of the few service providers with publicly available financial accounts. Their financial accounts show that 72% of total debt is raised offshore and swapped back into AUD using cross currency swaps[14];

- The AUD debt capital markets have little capacity to fund BBB+ credit risk for a term of 10yrs.

Assuming that the majority of debt to be raised by Networks NSW will – of necessity - be raised in foreign currencies and swapped back into AUD, we estimate the costs over the market mid-rate (based on UBS internal models) – assuming a benchmark efficient entity credit rating and a term of 10-years - to be as follows:

- Cross currency swap credit, capital & execution costs for a BBB+ rated entity 18bp;

- AUD interest rate swap credit, capital & execution costs for a BBB+ rated entity 5bp;

- Tracking risk between the RBA & Bloomberg estimates and market fixed rates (based on 2 standard deviation measure of intra-day volatility) 9bp. Ideally the benchmark efficient entity would hedge all interest rate risk at the exact time that both the RBA and Bloomberg set fixed rates. There is insufficient disclosure as to the exact source and timing for both the RBA & Bloomberg data, the RBA data is published monthly and not daily and the RBA data is calculated by reference to Commonwealth Government Securities and not swap rates. Tracking risk reflects the potential for a differential between a the swap rate at any given time on any day during the averaging period and the methodology, source and timing for the data used by the RBA & Bloomberg;

- Deferral – a hedge of interest rate risk in advance of the start of a regulatory period will incur additional cost given the normal shape of the AUD yield curve. Depending upon the term of the mismatch between the averaging period and the regulatory period i.e. the deferral, the cost will be of the order of 6bp.

The 38bp all in cost of hedging is before any adjustments for liquidity premiums based on the size of the Networks NSW requirements and currency related volatility outside of averaging periods. We note that Networks NSW will also face material bank counterparty risk and market disclosure issues. Few Australian banks trade derivatives within information barriers – the effect of which may lead to heightened market volatility when large risk positions are hedged in the market.

The cost of hedging for Networks NSW is calculated as follows:

38bp x DV01 (value of 1bp pa based on the Networks NSW notional debt amount as at 30 June 2014 for a 10 year period) of $13.7m = **$521m**. If we use actual debt rather than notional debt, the cost of the hedge would be $558m. This is before costs for any additional liquidity premium and currency related volatility associated with offshore debt issuance can be quantified.

[CONFIDENTIAL]

We see no valid argument that supports the view that the cost of hedging either interest rate risk or foreign currency debt issuance swapped back into AUD is "insignificant".

We made a case earlier that derivatives turnover data published in June 2012 is of little relevance to a 2014 AER determination and to market liquidity at the start of 2015. It is our view that liquidity for long dated single currency interest rate swaps has declined since 2012 as the full impact of global regulatory reform – particularly Basel 3, the Wall Street Reform and Consumer Protection Act (also known as the Dodd Frank Act) and the fourth Capital Requirements Directive (CRD IV) in Europe – have resulted in interest rate derivatives becoming a "very capital intensive product". Deutsche Bank Chief Risk Officer, Stuart Lewis commented as follows in October 2014:

"If I look at the consumption of risk-weighted assets (RWAs) versus the revenues this generates for the bank, those revenues are relatively small, resulting in a very poor return on RWAs," he said. "The gross-ups on derivatives that we face as an institution are substantial. So whatever metrics you use, whether it's return on assets, return on CRD IV or Basel III assets, the one product that sticks out as low return is derivatives instruments – in particular on the core rates side."[15]

Proprietary trading activity in interest rate swaps has all but disappeared. We regard a daily hedge requirement of $300m for a term of 10 years for the 2014-2019 AER determination as an aggressive assumption.

KangaNews[16] confirmed this, commenting as follows

"At its simplest level, the driver behind increasing cross-currency swap costs for corporate borrowers is a common theme across post-financial crisis capital markets: the requirement for additional capital – to be held against risk assets – in an environment where all capital is more expensive.

However, the drivers of greater cost in cross-currency swap provision are not purely regulatory. Having been caught cold in the financial crisis, individual banks are making concerted efforts better to model the volatility of both derivatives transaction components and – even more significantly – the credit quality of their counterparties.

In the corporate world, the new dynamics in the swap market are already adding to the cost of repatriating funds sourced in foreign currencies – and there may be even greater imposts in future. Derivatives bankers say a typical high triple-B rated Australian corporate has likely already seen the cost of a clean-line cross-currency swap for seven- to 10-year funds raised in the US private placement (USPP) market increase to
15-25 basis points from something closer to 10 basis points pre-financial crisis."

We estimate the hedging transaction costs for Networks NSW to be of the order of $521m - assuming the AER benchmark efficient rating of BBB+ - before additional adjustments for liquidity premiums and currency related volatility. Given that debt related transaction costs have been allowed in the draft determination, we believe that there is a valid case to argue – based on consistency – that the transaction costs associated with hedging risk should also be allowed – particularly since the domestic capital markets are not in a position to fund service providers and debt issuance, capex and opex will largely be funded in offshore capital markets and swapped back into AUD.

Note that much of this hedge cost analysis assumes the AER benchmark efficient rating of BBB+. In the event that Networks NSW achieve a rating of less than BBB+, the cost of hedging will increase materially

[CONFIDENTIAL]

Cash collateral would offset the credit risks associated with long dated cross currency swaps through daily exchanges of cash to offset the change in the mark to market position of the swap. The cash collateral would need to be funded by Networks NSW. The quantum of cash collateral required cannot be quantified and is theoretically unlimited.

<u>Conclusion</u>

We have reviewed AFMA data covering the Networks NSW averaging period in 2008 and also that applicable at the time that the Australian Competition Tribunal made its decision in 2009.

It is our view that NSW service providers could not have hedged interest rate risk within the 2008 averaging period. We have quantified the potential risk of a partial hedge and of entering a hedge in the period beyond the averaging period at $819m.

It is our view that NSW service providers could not have hedged the credit spread component of the cost of debt calculation within the averaging period unless all debt was refinanced in that period. As no debt was issued in the Australian capital markets in the period from the Lehman default to the end of 2008 and $2.4b was issued in total in 2009, it is our view that the credit spread component of the cost of debt calculation could not have been hedged within the averaging period.

The trailing average debt management approach adopted by Networks NSW was the appropriate efficient, low risk strategy at that time. As interest rates have fallen throughout the 2009 – 2014 regulatory period, the cost of the trailing average debt management strategy has been reflected in the nominal pre-tax return on debt for the 2014 – 2019 regulatory period submitted by Ausgrid, Endeavour Energy and Essential Energy. This is higher than the current spot rate for nominal pre-tax return on debt.

It is our view that should Networks NSW achieve the AER benchmark efficient rating of BBB+ or better, then global capital markets will support efficient debt issuance. The majority of that issuance will be sourced from US and European public debt markets and swapped back into AUD - unless access to funding from NSW Treasury Corporation remains in place for the full term of the regulatory period. Where the majority of the debt is sourced from offshore and swapped back into AUD, the cost of that hedge has been calculated to be $521m. We do not regard the cost of hedging as being insignificant.

[CONFIDENTIAL]

Debt market access for counterparties rated sub investment grade is restricted largely to AUD bank loan, US high yield and US term loan B markets. These markets are unlikely to support a debt issuance requirement of $15,993m for a term of up to 10 years.

[CONFIDENTIAL]

Peter Kingston
16 January 2015.

Reference sources:

1. "Survey of the OTC Derivatives Market in Australia", May 2009, prepared by APRA, ASIC and the RBA page 13.
2. "Survey of the OTC Derivatives Market in Australia", May 2009, prepared by APRA, ASIC and the RBA pages 12-13.

3. AFMA 2009 Australian Financial Markets Report – Interest Rate and Cross Currency Swaps annual turnover summary 2008-09, Fixed AUD : Floating AUD - includes survey respondents and other banks (excludes in-house transactions fund managers, hedge funds / CTAs, Government, other central banks and other) page 37
4. $1,561,178m / 365 * (7/5) = $5,988m per business day
5. AFMA Australian Financial Markets Report 2008, Interest Rate and Cross-Currency Swaps Outstandings by Maturity at 30 May 2008, page 28. Data on swap outstandings was not included in the AFMA 2009 report.
6. This is a conservative assumption. We used a base date of 16 November 2009 (mid-month) for the Australian Competition Tribunal decision. As hedging cannot be back-dated, we looked at a 15 business day period from 16 November 2009. This took us to 7 December 2009. The remaining risk period of 76 business days then took us through to 26 March 2010. The difference between 7 December 2009 and 26 March 2010 is longer than 3 calendar months. As risk increases over time, using a 3 calendar month period arguably understates the potential risk.
7. "Survey of the OTC Derivatives Market in Australia", May 2009, prepared by APRA, ASIC and the RBA pages 1-2
8. AFMA 2009 Australian Financial Markets Report – Interest Rate and Cross Currency Swaps annual turnover summary 2008-09, Fixed AUD : Floating AUD - includes survey respondents and other banks (excludes in-house transactions fund managers, hedge funds / CTAs, Government, other central banks and other) page 37
9. AFMA Australian Financial Markets Report 2008, Interest Rate and Cross-Currency Swaps Outstandings by Maturity at 30 May 2008, page 28
10. Sub investment grade implies a credit rating of less than BBB- (Standard & Poor's) or Baa3 (Moody's).
11. Standard & Poor's Confidential Credit Assessment – Endeavour Energy, January 2015.
12. Markit is an independent provider of information services. Markit iTraxx indices are a family of European, Asian and Emerging Market tradable credit default swap indices.
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14. AusNet Services Debt Securities Information http://www.ausnetservices.com.au/None/Debt+Securities+Information+Folders.html
15. Risk.net "Deutsche Bank CRO: derivatives becoming loss leader" 23 October 2014 http://www.risk.net/risk-magazine/news/2377264/deutsche-bank-cro-derivatives-becoming-loss-leader?utm_term=&utm_content=Deutsche%20Bank%20CRO%3A%20derivatives%20becoming%20loss%20leader&utm_campaign=RN.All.DU.A.MF0600&utm_medium=Email&utm_source=RN.DCM.Scheduled_Updates
16. KangaNews "A Heavy Cross to Bear", July August 2012 http://www.kanganews.com/magazine/2012/212-2012-july-august-magazine

UBS

Annual Report 2013

Our *performance* in 2013

Table of contents

Dear shareholders,

2013 was the first full year of execution following our announcement of the accelerated implementation of our strategy. We made excellent progress thanks to the dedication of our employees, the trust and confidence of our clients, and the support of our shareholders. We accomplished our goals of further adapting our business to better serve clients, reducing risk, delivering more sustainable performance and enhancing shareholder returns. All our businesses were profitable in every quarter, demonstrating that the firm's model has the flexibility to adapt and perform well in a variety of market conditions. This enabled us to finish a transformational year ahead of the majority of our strategic and financial targets.

The financial strength we have created as a firm is the foundation of our success as it gives us the flexibility to execute our strategy effectively in the new operating environment. Additionally, it reinforces client confidence while allowing us to address the challenges of the past and to absorb unexpected events. During the year, we increased adjusted[1] profit before tax 44% to CHF 4.1 billion. Most importantly, our progress was recognized by our clients, who again entrusted us with more of their assets and business than in the prior year, with our wealth management businesses attracting a combined CHF 54 billion of net new money in 2013 alone, 14% more than in the prior year.

We operate in an environment still characterized by increased and shifting regulation and with markets affected by the turbulence of macroeconomic, geopolitical and unresolved fiscal issues. As a Swiss bank, we are subject to some of the most stringent regulatory requirements in the world. We acted early and decisively to prepare our business for the future with a clear strategy that focused on building and maintaining our industry-leading capital position. During 2013, we enhanced this position, exceeding our own ambitious year-end capital targets. Since we announced our strategy in the second half of 2011, we have more than doubled our fully applied Basel III common equity tier 1 (CET1) ratio from around 6% to 12.8%. We achieved this improvement primarily through steady reductions in fully applied risk-weighted assets (RWA) from around CHF 400 billion to CHF 225 billion at the end of 2013, already meeting our 2015 target. We set a target of a fully applied Basel III CET1 ratio of 13% by the end of 2014, comfortably above the regulatory minimum of 10% by 2019.

We finished 2013 well ahead of our plan to manage down RWA in our Non-core and Legacy Portfolio in Corporate Center, and achieved this in a manner that protected shareholder value. Most of the decline in Group RWA resulted from disposals and other exposure reduction measures in these units. We also continued to successfully deleverage our balance sheet, reducing total assets by over CHF 400 billion since we announced our strategy. Our Basel III funding and liquidity ratios and our Swiss SRB leverage ratio remain comfortably above our regulatory requirements. We implemented firm-wide programs to enhance operational excellence and efficiency, taking gross cost savings measured against the first half of 2011 to CHF 2.2 billion.

Our success enables us to continue delivering on our stated objective of progressive capital returns to shareholders with a recommendation for a 67% increase in dividend to CHF 0.25 per share for 2013. We are confident that we will achieve our target of a fully applied Basel III CET1 ratio of 13% in 2014. After reaching this, we aim for a total payout ratio of at least 50% of our profits.

Our wealth management businesses generated CHF 3.3 billion in adjusted[1] profit before tax in 2013, 25% higher than in the prior year. As the largest and fastest growing large-scale wealth manager in the world[2], we are well positioned to gain from improving macroeconomic conditions, a gradual recovery in interest rates and any consequent improvement in client risk appetite. We were awarded "Best Global Wealth Manager" by Euromoney for the second consecutive year and Private Banker International named us "Outstanding Global Private Bank 2013." In **Wealth Management,** growth and profitability were led by Asia Pacific, where, in particular, the partnership between Wealth Management and the Investment Bank is a key competitive advantage for us, delivering holistic solutions and attracting new clients. Europe also recorded positive net new money despite cross-border outflows. **Wealth Management Americas** concluded a record year with the achievement of our ambition of USD 1 billion in adjusted[1] profit before tax for the year. With financial advisors who generate on average USD 1 million in annual revenue, our Wealth Management Americas team has built a business with USD 1 trillion in invested assets. Our **Retail & Corporate** business in Switzerland delivered stable adjusted[1] profit before tax despite ongoing pressure on net interest margins. The business maintained its mar-

1 Please refer to "Group performance" in the "Financial and operating performance" section for more information on adjusted results. 2 Scorpio Partnership Global Private Banking Benchmark 2013, based on 2012 data for banks with assets under management of over USD 500 billion.

Axel A. Weber Chairman of the Board of Directors **Sergio P. Ermotti** Group Chief Executive Officer ket-leading position as average client deposits grew faster than the Swiss economy. Retail & Corporate remains an important source of new business for Wealth Management, Global Asset Management and the Investment Bank. The strong performance of our Retail & Corporate business in our home market was a key factor in Euromoney naming UBS "Best Bank in Switzerland" for the second consecutive year. **Global Asset Management** delivered an 8% increase in adjusted[1] profit before tax and an adjusted[1] return on attributed equity of 33%, despite negative net new money. We transformed our **Investment Bank,** enabling it to deliver an excellent performance while operating efficiently with reduced RWA and funded assets. In 2013, the business significantly outperformed its target of an adjusted[1] pre-tax return on attributed equity of greater than 15%. We maintained strong positions globally in the key areas where we have decided to compete and serve our clients with best-in-class capabilities. In addition to being recognized as number one in cash equity globally in a leading private survey, our Investment Bank was awarded numerous accolades including Derivatives Intelligence's "Structured Products House of the Year" and Euroweek's "ECM Bank of the Year." In **Corporate Center – Core Functions,** we reduced total operating expenses before cost allocations despite recording net restructuring charges that were considerably higher than in 2012 as we pushed ahead with measures to reduce costs for the longer term. In **Corporate Center – Non-core and Legacy Portfolio,** fully applied RWA decreased by CHF 39 billion to CHF 64 billion, significantly better than our year-end 2013 target of CHF 85 billion.

Our clients increasingly want to use their wealth to drive positive change in society. For a long time, we have been helping them to invest according to sustainable and responsible criteria. Building on this capability, in 2013 we made a significant commitment to maximize these efforts through a dedicated, industry-leading platform. This will deliver comprehensive research, advisory and product capabilities in the areas of sustainable investments and philanthropy. We also initiated and co-launched the Thun Group of Banks' discussion paper on banking and human rights based on the United Nations' Guiding Principles on Business and Human Rights in the financial industry. In addition, UBS was named in the Dow Jones Sustainability Indices, which track leading sustainability-driven companies worldwide. As a firm, we remained focused on educational and entrepreneurship projects globally, including through our employee and community affairs programs. Our clients and employees mobilized to contribute to the Typhoon Haiyan relief efforts in the Philippines. We also maintained our support of the arts through culturally enriching programs for our clients, employees and the public. Highlights included becoming the global partner of Art Basel and the inaugural exhibition in New York of the Guggenheim UBS MAP project, which showcases art from emerging markets. In Switzerland's capital, UBS spon-

1 Please refer to "Group performance" in the "Financial and operating performance" section for more information on adjusted results.

sored the Bernisches Historisches Museum's most-visited exhibition ever, featuring the well-known terracotta army of Qin, the first Chinese emperor.

The firm's success ultimately rests on the achievements of all our employees and the trust placed in us by our clients and shareholders. We would like to thank them for their continued support. We will continue to execute our strategy in a disciplined manner in order to ensure the firm's long-term success and deliver sustainable returns to our shareholders.

14 March 2014

Yours sincerely,

UBS

Axel A. Weber
Chairman of the
Board of Directors

Sergio P. Ermotti
Group Chief Executive Officer

UBS key figures

	As of or for the year ended		
CHF million, except where indicated	**31.12.13**	31.12.12	31.12.11
Group results			
Operating income	**27,732**	25,423	27,788
Operating expenses	**24,461**	27,216	22,482
Operating profit / (loss) before tax	**3,272**	(1,794)	5,307
Net profit / (loss) attributable to UBS shareholders	**3,172**	(2,480)	4,138
Diluted earnings per share (CHF)[1]	**0.83**	(0.66)	1.08
Key performance indicators[2], balance sheet and capital management, and additional information			
Performance			
Return on equity (RoE) (%)	**6.7**	(5.1)	9.1
Return on tangible equity (%)[3]	**8.0**	1.6	11.9
Return on risk-weighted assets, gross (%)[4]	**11.4**	12.0	13.7
Return on assets, gross (%)	**2.5**	1.9	2.1
Growth			
Net profit growth (%)[5]			(44.5)
Net new money growth (%)[6]	**1.4**	1.6	1.9
Efficiency			
Cost / income ratio (%)	**88.0**	106.6	80.7
Capital strength			
Common equity tier 1 capital ratio (%, phase-in)[7]	**18.5**	15.3	
Common equity tier 1 capital ratio (%, fully applied)[7]	**12.8**	9.8	
Swiss SRB leverage ratio (%, phase-in)[8]	**4.7**	3.6	
Balance sheet and capital management			
Total assets	**1,009,860**	1,259,797	1,416,962
Equity attributable to UBS shareholders	**48,002**	45,949	48,530
Total book value per share (CHF)[9]	**12.74**	12.26	12.95
Tangible book value per share (CHF)[9]	**11.07**	10.54	10.36
Common equity tier 1 capital (phase-in)[7]	**42,179**	40,032	
Common equity tier 1 capital (fully applied)[7]	**28,908**	25,182	
Risk-weighted assets (phase-in)[7]	**228,557**	261,800	
Risk-weighted assets (fully applied)[7]	**225,153**	258,113	
Total capital ratio (%, phase-in)[7]	**22.2**	18.9	
Total capital ratio (%, fully applied)[7]	**15.4**	11.4	
Additional information			
Invested assets (CHF billion)[10]	**2,390**	2,230	2,088
Personnel (full-time equivalents)	**60,205**	62,628	64,820
Market capitalization[9]	**65,007**	54,729	42,843

1 Refer to "Note 9 Earnings per share (EPS) and shares outstanding" in the "Financial information" section of this report for more information. 2 For the definitions of our key performance indicators, refer to the "Measurement of performance" section of this report. 3 Net profit / loss attributable to UBS shareholders before amortization and impairment of goodwill and intangible assets (annualized as applicable) / average equity attributable to UBS shareholders less average goodwill and intangible assets. 4 Based on Basel III risk-weighted assets (phase-in) for 2013. Based on Basel 2.5 risk-weighted assets for 2012. Based on Basel II risk-weighted assets for 2011. 5 Not meaningful and not included if either the reporting period or the comparison period is a loss period. 6 Group net new money includes net new money for Retail & Corporate and excludes interest and dividend income. 7 Based on the Basel III framework as applicable for Swiss systemically relevant banks (SRB). Numbers for 31 December 2012 are on a pro-forma basis. Refer to the "Capital management" section of this report for more information. 8 Refer to the "Capital management" section of this report for more information. 9 Refer to "UBS shares" in the "Capital management" section of this report for more information. 10 Group invested assets includes invested assets for Retail & Corporate.

Corporate information

The legal and commercial name of the company is UBS AG. The company was formed on 29 June 1998, when Union Bank of Switzerland (founded 1862) and Swiss Bank Corporation (founded 1872) merged to form UBS AG.

UBS AG is incorporated and domiciled in Switzerland and operates under the Swiss Code of Obligations and Swiss Federal Banking Law as an Aktiengesellschaft, a corporation that has issued shares of common stock to investors.

The addresses and telephone numbers of our two registered offices are:
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UBS AG shares are currently listed on the SIX Swiss Exchange and the New York Stock Exchange.

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Computershare,
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Shareholder online inquiries:
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Shareholder website:
www.computershare.com/investor

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Calls from outside the US +1-201-680 6578
Fax +1-201-680 4675

Corporate calendar

Publication of the first quarter 2014 report
Tuesday, 6 May 2014

Annual General Meeting of Shareholders
Wednesday, 7 May 2014

Publication of the second quarter 2014 report
Tuesday, 29 July 2014

Publication of the third quarter 2014 report
Tuesday, 28 October 2014

Imprint

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UBS and its businesses

We draw on our over 150-year heritage to serve private, institutional and corporate clients worldwide, as well as retail clients in Switzerland. Our business strategy is centered on our pre-eminent global wealth management businesses and our leading universal bank in Switzerland, complemented by our Global Asset Management business and our Investment Bank, with a focus on capital efficiency and businesses that offer a superior structural growth and profitability outlook. Headquartered in Zurich and Basel, Switzerland, we have offices in more than 50 countries, including all major financial centers, and approximately 60,000 employees. UBS AG is the parent company of the UBS Group (Group). Under Swiss company law, UBS AG is organized as an Aktiengesellschaft, a corporation that has issued shares of common stock to investors. The operational structure of the Group comprises the Corporate Center and five business divisions: Wealth Management, Wealth Management Americas, Retail & Corporate, Global Asset Management and the Investment Bank.

Wealth Management provides comprehensive financial services to wealthy private clients around the world – except those served by Wealth Management Americas. Its clients benefit from the entire spectrum of UBS resources, ranging from investment management to estate planning and corporate finance advice, in addition to specific wealth management products and services.

Wealth Management Americas provides advice-based solutions and banking services through financial advisors who deliver a fully integrated set of products and services specifically designed to address the needs of ultra high net worth and high net worth individuals and families. It includes the domestic US business, the domestic Canadian business and international business booked in the US.

Retail & Corporate maintains a leading position across retail, corporate and institutional client segments in Switzerland and constitutes a central building block of UBS Switzerland's pre-eminent universal bank model. It provides comprehensive financial products and services embedded in a true multi-channel experience, offering clients convenient access. It continues to enhance the range of life-cycle products and services offered to clients, while pursuing additional growth in advisory and execution services.

Global Asset Management is a large-scale asset manager with diversified businesses across investment capabilities, regions and distribution channels. It offers investment capabilities and styles across all major traditional and alternative asset classes including equities, fixed income, currencies, hedge funds, real estate, infrastructure and private equity that can also be combined into multi-asset strategies. The fund services unit provides professional services including fund set-up, accounting and reporting for both traditional investment funds and alternative funds.

The *Investment Bank* provides corporate, institutional and wealth management clients with expert advice, innovative financial solutions, outstanding execution and comprehensive access to the world's capital markets. It offers financial advisory and capital markets, research, equities, foreign exchange, precious metals and tailored fixed income services in rates and credit through its two business units, Corporate Client Solutions and Investor Client Services. The Investment Bank is an active participant in capital markets flow activities, including sales, trading and market-making across a range of securities.

The *Corporate Center* comprises Corporate Center – Core Functions and Corporate Center – Non-core and Legacy Portfolio. Corporate Center – Core Functions provides Group-wide control functions including finance, risk control (including compliance) and legal. In addition, it provides all logistics and support functions, including operations, information technology, human resources, corporate development, regulatory relations and strategic initiatives, communications and branding, corporate real estate and administrative services, procurement, physical security, information security, offshoring and treasury services such as funding, balance sheet and capital management. Corporate Center – Core Functions allocates most of its treasury income, operating expenses and personnel associated with the abovementioned activities to the businesses based on capital and service consumption levels. Corporate Center – Non-core and Legacy Portfolio comprises the non-core businesses and legacy positions previously part of the Investment Bank.

Our Board of Directors






The Board of Directors (BoD), under the leadership of the Chairman, decides on the strategy of the UBS Group upon recommendation of the Group Chief Executive Officer (Group CEO), exercises ultimate supervision over senior management, and appoints Group Executive Board (GEB) members. The BoD also approves all financial statements for issue. Shareholders elect each member of the BoD, which in turn appoints its Chairman, Vice Chairmen, Senior Independent Director, members of BoD committees, their respective Chairpersons and the Company Secretary. In 2013, our BoD met the standards of the Organization Regulations for the percentage of directors that are considered independent.

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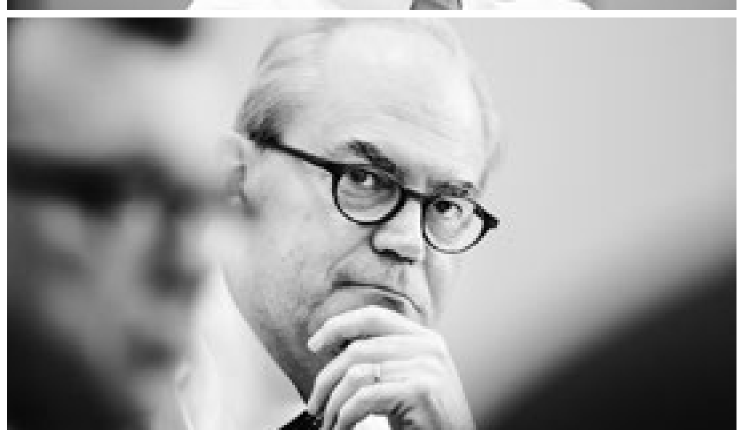

1 **Axel A. Weber** Chairman of the Board of Directors/Chairperson of the Corporate Responsibility Committee/Chairperson of the Governance and Nominating Committee 2 **William G. Parrett** Chairperson of the Audit Committee/member of the Corporate Responsibility Committee 3 **Reto Francioni** Member of the Corporate Responsibility Committee 4 **Isabelle Romy** Member of the Audit Committee/member of the Governance and Nominating Committee 5 **Ann F. Godbehere** Chairperson of the Human Resources and Compensation Committee/member of the Audit Committee 6 **Beatrice Weder di Mauro** Member of the Audit Committee/member of the Risk Committee 7 **Rainer-Marc Frey** Member of the Human Resources and Compensation Committee/member of the Risk Committee 8 **Joseph Yam** Member of the Corporate Responsibility Committee/member of the Risk Committee 9 **Axel P. Lehmann** Member of the Risk Committee 10 **Helmut Panke** Member of the Human Resources and Compensation Committee/member of the Risk Committee 11 **David Sidwell** Senior Independent Director/Chairperson of the Risk Committee/member of the Governance and Nominating Committee 12 **Michel Demaré** Independent Vice Chairman/member of the Audit Committee/member of the Governance and Nominating Committee/member of the Human Resources and Compensation Committee

Our Group Executive Board






The management of the business is delegated by the Board of Directors to the Group Executive Board. Under the leadership of the Group Chief Executive Officer, the Group Executive Board has executive management responsibility for the UBS Group and its businesses. It assumes overall responsibility for the development of the Group and business division strategies and the implementation of approved strategies.

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→ **To read the full biographies of our Board members, visit www.ubs.com/geb or refer to "Group Executive Board" in the "Corporate governance" section of this report**

1 **Sergio P. Ermotti** Group Chief Executive Officer 2 **Lukas Gähwiler** CEO UBS Switzerland and CEO Retail & Corporate 3 **Markus U. Diethelm** Group General Counsel 4 **Philip J. Lofts** Group Chief Risk Officer 5 **Tom Naratil** Group CFO and Group Chief Operating Officer 6 **Andrea Orcel** CEO Investment Bank 7 **Robert J. McCann** CEO Wealth Management Americas and CEO UBS Group Americas 8 **Chi-Won Yoon** CEO UBS Group Asia Pacific 9 **Jürg Zeltner** CEO UBS Wealth Management 10 **Ulrich Körner** CEO Global Asset Management and CEO UBS Group Europe, Middle East and Africa

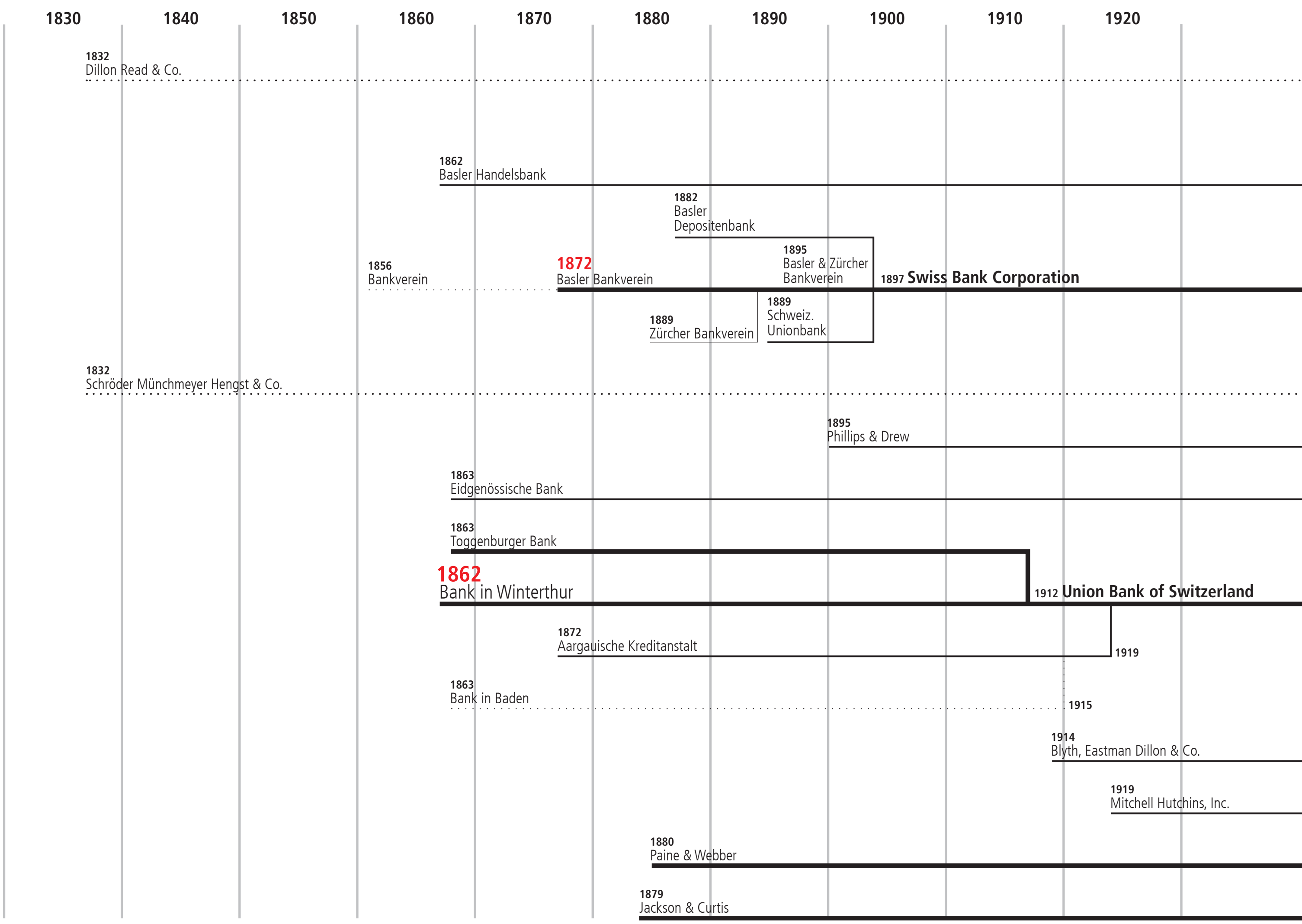
All titles presented are as of 1 January 2014.

The making of UBS

UBS has played a pivotal role in the development and growth of Switzerland's banking tradition since the firm's origins in the mid-19th century. In 2012, the year of our 150th anniversary, we accelerated our strategic transformation of the firm to create a business model that is better adapted to the new regulatory and market circumstances and that we believe will result in more consistent and high-quality returns. In 2013, we made substantial progress in transforming our firm, further reinforcing its foundations while focusing on our traditional strengths.

The origins of the banking industry in Switzerland can be traced back to medieval times. This long history may help explain the widespread impression, reinforced in popular fiction, that Switzerland has always possessed a strong financial sector. In reality, the size and international reach of the Swiss banking sector we know today is largely a product of the second half of the 20th century, strongly influenced by two banks: Union Bank of Switzerland and Swiss Bank Corporation (SBC), which merged to form UBS in 1998.

At the time of the merger, both banks were already well-established and successful in their own right. Union Bank of Switzerland celebrated its 100th anniversary in 1962, tracing its origins back to the Bank in Winterthur. SBC marked its centenary in 1972 with celebrations in honor of its founding forebear, the Basler Bankverein. The historical roots of PaineWebber, acquired by UBS in



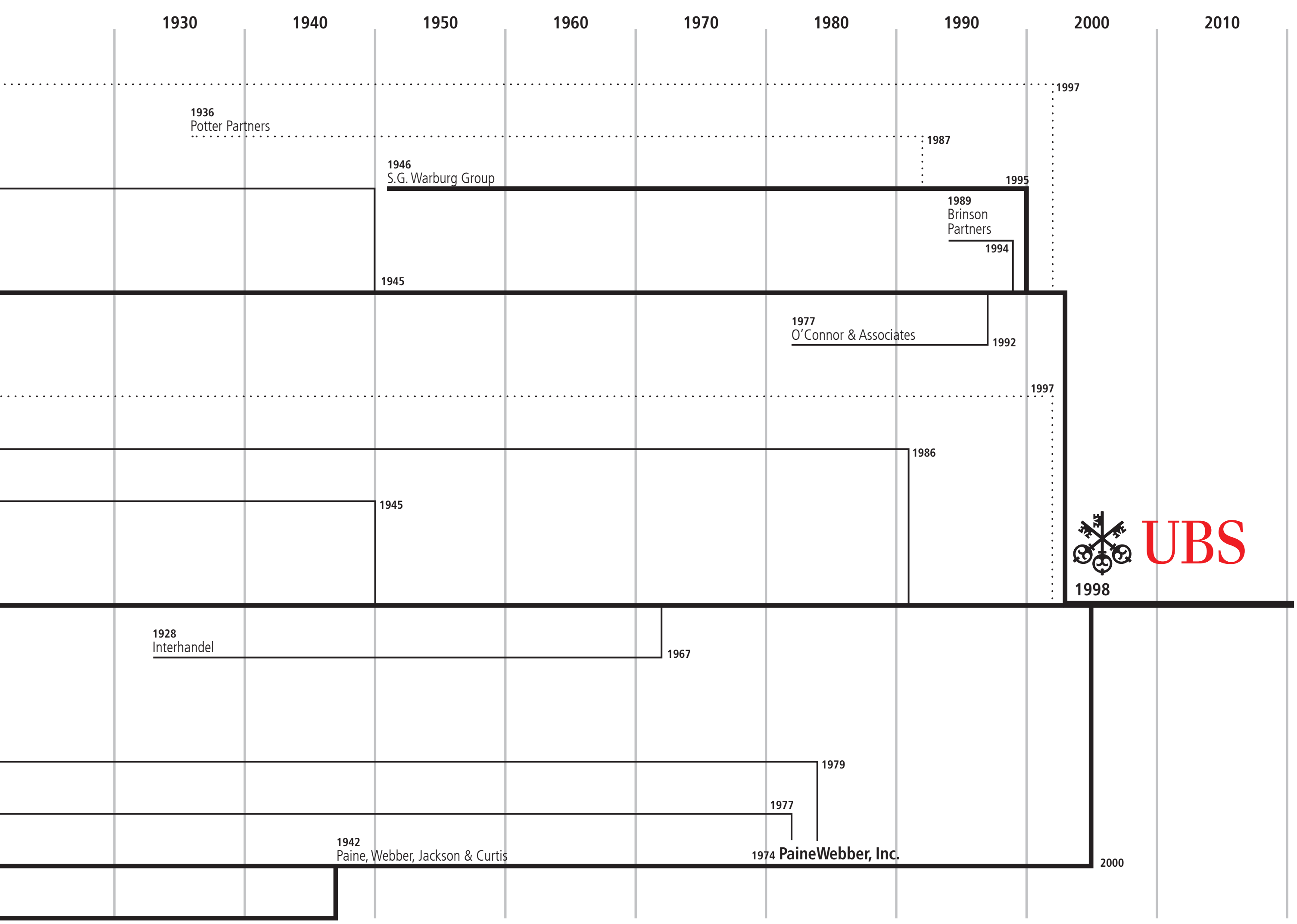
2000, go back to 1879, while S.G. Warburg, the central pillar upon which UBS's Investment Bank was built, commenced operations in 1946.

In the early 1990s, SBC and Union Bank of Switzerland were both commercial banks operating mainly out of Switzerland. The banks shared a similar vision: to become a world leader in wealth management, a successful global investment bank and a top-tier global asset manager, while remaining an important commercial and retail bank in their home market of Switzerland.

Union Bank of Switzerland, the largest and best-capitalized Swiss bank of its time, pursued these goals primarily through a strategy of organic growth. In contrast, SBC, then the third-largest Swiss bank, grew through a combination of partnership and acquisition. In 1989, SBC started a joint venture with O'Connor, a leading US derivatives firm noted for its dynamic and innovative culture, its meritocracy and its team-oriented approach. O'Connor brought state-of-the-art risk management and derivatives technology to SBC, and in 1992 SBC moved to fully acquire O'Connor. In 1994, SBC added to its capabilities when it acquired Brinson Partners, a leading US-based institutional asset management firm.

The next major milestone was in 1995, when SBC acquired S.G. Warburg, the British merchant bank. The deal helped SBC fill a strategic gap in its corporate finance, brokerage, and research capabilities and, most importantly, brought with it an institutional client franchise that remains crucial to our equities business to this day.

The 1998 merger of SBC and Union Bank of Switzerland into the firm we know today created a world-class wealth manager and the largest universal bank in Switzerland, complemented by a strong investment bank and a leading global institutional asset manager. In 2000, UBS grew further with the acquisition of PaineWebber, establishing the firm as a significant player in the US. UBS has established a strong footprint in the Asia Pacific



region and emerging markets based on a presence in many of these countries going back decades.

In 2007, the effects of the global financial crisis started to be felt across the financial industry. This crisis had its origins in the securitized financial product business linked to the US residential real estate market. Between the third quarter of 2007 and the fourth quarter of 2009, we incurred significant losses on these assets. We responded with decisive action designed to reduce risk exposures and stabilize our businesses, including raising capital on multiple occasions.

More recently, we continued to improve the firm's capital strength to meet new and enhanced industry-wide regulatory requirements. Our position as one of the world's best-capitalized banks, together with our stable funding and sound liquidity positions, provides us with a solid foundation for our success. In 2012, we announced a significant acceleration in the implementation of our strategy communicated a year earlier. In 2013, we continued to focus our activities on a set of highly synergistic, less capital- and balance sheet-intensive businesses dedicated to serving clients and well-positioned to maximize value for shareholders.

➔ Refer to www.ubs.com/history for more information on UBS's more than 150 years of history

Following you *abroad.* Your *Swiss Corporate* Bank in Asia.

As a partner to the Asia Pacific subsidiaries of Swiss corporate clients, we deliver superior services and high-quality solutions tailored to your specific requirements.

Your advantages

- The benefits of our expertise in the local markets and exclusive focus on serving subsidiaries of Swiss corporate clients in APAC.
- Easy access to local banking solutions based on our in-depth knowledge of Swiss corporates' needs and close coordination with our Swiss headquarters.
- Tailored products and services to meet your particular circumstances and requirements.
- Efficient coordination of UBS resources and timely execution of your orders thanks to the permanent local presence of our senior relationship managers.

Our offering*

Cash Management Services

- Corporate Current Accounts
- International and Domestic Payments and Collections
- Cash Reporting
- Cheque Handling
- Client Connectivity
- Liquidity Management
- Cash Investment

Foreign Exchange Solutions

- Trade (Spot, Forward, Structured Products)
- Invest
- Hedge with a systematic strategy

Trade Finance

- Bank Guarantees and Standby Letter of Credit
- Documentary Credits
- Documentary Collections

Financing Solutions

- Overdraft Facilities
- Working Capital Loans, Short & Mid Term Loans
- Committed Loans
- Special Financing (Participating in Syndicated Loans, Project Financing, etc.)
- Hedging Interest Rates

Additional Services

- Investment Bank Services
- Asset Servicing
- Wealth Management
- Asset Management
- Corporate Aircraft Financing

Additional booking centers such as South Korea and Taiwan subject to availability of required products and services.

* Please note that not all services are available everywhere.

Your corporate banking partner in *Asia Pacific*

Contacts

Hong Kong
UBS AG
52/F Two International Finance Centre
8 Finance Street, Central, Hong Kong
Phone: +852-2971 6649
E-mail: cic-apac@ubs.com

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UBS AG
One Raffles Quay
#50-01 North Tower, Singapore 048583
Phone: +65-6495 8157
E-mail: cic-apac@ubs.com

Peter Kingston

PETER KINGSTON
Executive Director, Derivatives

Nationality:	Australian
Professional qualifications:	B. Comm, University of Melbourne
Years with UBS:	14
Years within the industry:	25+
Location:	Sydney

RELEVANT EXPERIENCE

- Peter is a part of the Australian Derivatives team focusing on the derivative requirements for Australian counterparties
- Peter has 25+ years derivative experience working out of Melbourne, Sydney and Hong Kong—covering interest rate, currency, commodity and credit derivative markets in order to hedge risk throughout the region
- Since joining UBS in 2000, Peter has worked on transactions within the investment banking, debt capital markets, hybrid capital and private equity businesses. Some areas of specific emphasis during that time have included defined benefit superannuation, hedge accounting effectiveness, regulatory capital effectiveness for financial institutions, inflation hedging, derivative underwriting structures, AREIT risk management and distressed debt restructuring
- Infrastructure experience – part of teams involved in the NSW Ports consortium's acquisition of Port Botany and Kembla, NSW Government potential lease of the NSW electricity networks, Queensland Motorways acquisition of the CLEM7 tunnel, closeout of the Brisconnections and Cross City Tunnel debt & derivatives positions, initial submission on the cost for debt for Networks NSW submission to the Australian Energy Regulator

Hunt, Joe

JOE HUNT
Director, Capital Markets

Nationality: British

Professional qualifications: BA (Hons) International Business, Finance and Economics; Manchester University, United Kingdom

Years with UBS: 3

Years within the industry: 8

Location: Sydney, Australia

RELEVANT EXPERIENCE

- Joe joined the UBS Capital Markets team in Australia in 2011, having spent five years gaining experience across M&A advisory, acquisition and leveraged finance, private equity and debt capital markets origination
- Joe's capital markets experience includes:
  - Scentre Group's A$5.0 billion equivalent bond issues in 2014 across EUR, GBP and USD markets
  - Origin Energy's €1.0 billion hybrid issue, the largest hybrid issue to date from an Australian corporate
  - CBA's A$3.0 billion Tier 1 hybrid issue, the largest Tier 1 issue in the A$ retail market to date
  - Challenger's debut A$360 million Tier 1 hybrid issue
  - Tabcorp's A$250 million equity credit hybrid issue
  - Origin Energy's A$900 million equity credit hybrid issue
  - GlaxoSmithKline's US$9 billion 2, 5, 10 and 30yr SEC registered bond issue
  - SABMiller's US$1.25 billion 5 and 10 year 144a bond issue
  - Xstrata's US$500 million 30yr 144a bond issue
  - National Grid's €800 million 5yr bond issue
- M&A experience includes:
  - advising KKR on its US$24 billion acquisition of Alliance Boots, the first FTSE100 leveraged buyout
  - advising George Wimpey on its £5 billion merger of equals with Taylor Woodrow to form the UK's largest housebuilder
  - advising SABMiller on its US$1.2 billion acquisition of Grolsch
- Prior to joining UBS, Joe spent three years in M&A and DCM at J.P. Morgan in London and two years in private equity in the Middle East

Key, Jarrod

JARROD KEY
Managing Director, Head of Power, Utilities and Infrastructure

Nationality: Australian

Professional qualifications: Bachelor of Commerce (First Class Honours), Curtin University, WA
Member of the Institute of Chartered Accountants

Years with UBS: 6

Years within the industry: 13

Location: Sydney

RELEVANT EXPERIENCE

- Jarrod joined UBS from Allco Finance Group, having previously worked in investment banking positions with ABN AMRO (Sydney) and Dresdner Kleinwort (London).
- Jarrod has been involved in a broad range of M&A and Equity transactions, including:
  - Adviser to the NSW Government on its proposed $20 billion long term lease of NSW electricity networks (current)
  - Adviser to NSW Ports on its inaugural corporate credit rating (2014)
  - Adviser to DUET on its $397 million entitlement offer (2014)
  - Adviser to QIC on its sale of Queensland Motorways for $7.1 billion (2014)
  - Adviser on two separate $100 million DUET placements to fund investment in Fortescue River Gas Pipeline and Wheatstone Ashburton gas pipeline (2013 and 2014)
  - Adviser to Queensland Motorways on its acquisition of the CLEM7 tunnel from RiverCity Motorway for $618 million (2013)
  - NSW Ports consortium's acquisition of Port Botany and Kembla for $5.1 billion (2013)
  - Adviser on proposed acquisition of Electranet (2012)
  - Adviser on proposed acquisition of Hastings Diversified Utilities Fund (2012)
  - QIC on $3.1 billion acquisition of QML for the State of Queensland (2011)
  - MAp on $1.6 billion asset swap with Ontario Teachers Pension Plan (2011)
  - Financial adviser to NSW Treasury on the sale of WSN Environmental Solutions (2010)
  - Intoll, $3.5 billion takeover response with Canada Pension Plan Investment Board (2010)
  - Queensland Government, ~$6.5 billion IPO of Queensland Rail (2010)

Ramakrishnan, Shashank

SHASHANK RAMAKRISHNAN

Analyst, Investment Banking

Nationality: Australian

Professional qualifications: Bachelor of Commerce (First Class Honours)

Years with UBS: 3

Years within the industry: 3

Location: Sydney, Australia

RELEVANT EXPERIENCE

- Adviser to the NSW Government on its proposed $20 billion long term lease of NSW electricity networks (current)
- Adviser to NSW Ports on its inaugural corporate credit rating (2014)
- Adviser to ERM Power on its proposed acquisition of the assets of Macquarie Generation, and associated debt and equity funding packages (2014)
- Adviser to DUET on two separate $100 million placements to fund investment in Fortescue River Gas Pipeline and Wheatstone Ashburton gas pipeline (2013 and 2014)
- Adviser to ERM Power on it's A$75 million placement to fund acquisition of the remainder of Oakey Power Station (2013)
- Adviser to Transurban on its €500 million inaugural Euro bond issuance (2013)
- Adviser to the NSW Ports Consortium on it's A$5.1 billion acquisition of long-term leases over Port Botany, Port Kembla and related assets, and associated ~$2 billion committed bank debt facility (2013)
- Adviser to WorleyParsons on its ZAR900 million acquisition of TWP (2012)

REQUEST FOR QUOTATIONS (RFQ)

Provision of financeability analysis for NNSW companies following AER Draft Determination

Document No. RFQR7

Closing time for Submission of Quotes is 5:00 pm on the 9 December 2014

1) About Us

Networks NSW (NNSW) is an unincorporated joint venture between Ausgrid, Endeavour Energy and Essential Energy. Each of Ausgrid, Endeavour Energy and Essential Energy is a NSW Government state-owned energy corporation, incorporated under the Energy Services Corporations Act 1995 (NSW). Ausgrid, Endeavour Energy and Essential Energy distribute electricity to households and businesses across NSW.

Ausgrid, Endeavour Energy and Essential Energy have, through NNSW, established a company, NNSW Pty Limited, to act as agent for the joint venture, including acting as agent for each of Ausgrid, Endeavour Energy and Essential Energy. NNSW Pty Limited will conduct the RFT process and negotiate the terms of the Contracts as agent for the NNSW Participants.

Tenderers are encouraged to read further information about Ausgrid, Endeavour Energy and Essential Energy, their values and businesses, on their websites at www.ausgrid.com.au, www.endeavourenergy.com.au and www.essentialenergy.com.au.

2) Description of Requirements:

Networks NSW is seeking advice on the ability of the NSW DNSPs to fund new debt, and the costs associated with such funding, as stand-alone entities if faced with the cash flows provided for in the AER's draft determinations. Networks NSW is also seeking advice on any capital structure changes that would be required for Ausgrid, Endeavour and Essential Energy in the event the AER made final determinations consistent with the draft determinations to achieve BBB+ and BBB credit ratings respectively.

3) Lodgement Details:

Method of submission		
Closing date & time for submission of quotations ("Closing Date")	**Date:**	9 / 12 / 2014
	Time:	5:00 pm
RFQ Contact Person	**Name:**	
	Telephone:	
	Email:	

4) Responding to this RFQ

The Respondent must direct all communications related to this RFQ through the RFQ contact person above. Unauthorised communication with employees of the Company will lead to disqualification of the quotation.

Respondents must submit their quotation electronically in accordance with the Method of submission in Section 3 in Microsoft Office, Adobe Acrobat (PDF), AutoCAD or as prescribed by no later than the Closing Date.

Lodgement of a Quotation on this form indicates acceptance of the terms and conditions of the RFQ, and authorises the Company to make inquiries to determine the financial and technical capabilities of the Respondent.

5) Background

Networks NSW Context

The NNSW companies are responsible for transmitting electricity energy across the State of NSW and northern Victoria. In FY12 they had annual revenue of $2.45 billion and 12,692 employees. The objective of NNSW is to contain the future costs of building, maintain and operating the electricity network in a safe, reliable and sustainable manner. The combined network has over 800 major substations, 2.2 million poles and 190,000 smaller substations bound together by 279,000 kilometres of underground or overhead cable.

Ausgrid - supplies electricity to more than 1.6 million customers in Sydney, the Central Coast and the Hunter Region in New South Wales. In FY12 its network supplied electricity to more than 1,637,000 network customers and generated revenue of $1.12 billion. It has 5,868 full-time equivalent employees.

Endeavour Energy - manages an electricity distribution network for 883,658 customers or 2.1 million people across a network spanning Sydney's Greater West, the Illawarra and South Coast, the Blue Mountains and the Southern Highlands. In FY12 this network generated revenue of $0.76 billion and had 2,824 employees.

Essential Energy - is responsible for building, operating and maintaining Australia's largest electricity network delivering essential services to more than 800,000 homes and businesses across 95 per cent of NSW and parts of southern Queensland and northern Victoria. It also has water services with its Essential Water business which delivers water services to around 20,000 people in Broken Hill, Menindee, Sunset Strip and Silverton, and sewerage services to Broken Hill.

AER Determination Background

The NNSW companies submitted regulatory proposals to the Australian Energy Regulator (AER) on 29 May 2014. The regulatory proposals set out, amongst other things, proposed revenue requirements over the period from 1 July 2014 to 30 June 2019 using the "building block" approach set out in the National Electricity Rules (NER). Based on these proposals, the AER will make a draft determination on revenue allowances that can be recovered by each of the NSW DNSPs through electricity network charges over 2014-19. The AER is expected to publish its draft determination on 27 November 2014.

The NSW DNSPs are permitted to respond to issues raised in the AER's draft determination in a revised proposal by the 13 January 2015, following which the AER makes a final determination on allowed revenues by the end of April 2015. NNSW is currently assessing the impacts of adverse regulatory decisions by the AER on the financeability of the NSW DNSPs to include in the revised regulatory proposals for each business.

Project Purpose

Networks NSW is seeking analysis in support of the NNSW companies' revised regulatory proposals on benchmark efficient costs and required revenues for the 2014-19 regulatory period.

Project Scope

The adviser would be required to review the Profit & Loss, and Balance Sheet forecasts of Ausgrid, Endeavour and Essential Energy for 2015-16 to 2018-19 based on:

(a) the proposed allowed revenue outcomes from the AER's draft distribution determinations and capex and opex forecasts as per each businesses annual business plan forecasts; and

(b) the proposed allowed revenue outcomes, and the proposed allowances for capex and opex from the AER's draft distribution determinations.

In parallel to (but separate from) this proposed scope of work, a credit rating firm will assess the credit rating metrics and likely credit rating bands that each NSW DNSP would fall into based on the allowed revenues in the AER's draft determinations. This analysis will be drawn from the same Profit & Loss, and Balance sheet forecasts noted above.

The adviser would be required to combine the analysis from the credit rating firm and the adviser's own expertise in debt capital markets to assess the ability of Ausgrid, Endeavour and Essential Energy to access Australian debt capital markets to fund necessary expenditures over 2015-16 to 2018-19 and the costs associated with such funding. The analysis should be done on the basis of the "benchmark" entity rating set out in the draft determination (BBB+) and the likely credit rating bands that each NSW DNSP would fall into based on the allowed revenues in the AER's draft determinations.

The adviser is also requested to advise on the relative merits, in terms of the ability to access debt markets and the cost of access to such markets, of Ausgrid, Endeavour and Essential Energy:

(a) structuring their debt arrangements such that they had, in previous regulatory periods, borrowed debt on a long term basis and staggered the borrowing so that only a small proportion of the debt matured each year, and had entered into interest rate swap contracts to match the risk free rate component of their return on debt to the on-the-day rate, and now move to structure their debt arrangements in accordance with the AER's transitional arrangements whereby in the first regulatory year, the rate of return on debt is based on the estimated prevailing return on debt for that year; in the second regulatory year, the return on debt is the weighted average of the prevailing rates in the first and second regulatory year; in the third regulatory year, the allowed rate of return on debt is the weighted average of the prevailing rates in the first, second and third regulatory years, and so on until the transitional period of 10 years ends;

(b) structuring their debt arrangements such that in previous regulatory periods they had adopted a trailing average portfolio approach and in the subsequent regulatory periods they continue to adopt such an approach.

Deliverables

The consultant is to provide a report addressing the items above. The report must be suitable for inclusion in revised submissions to the AER by NNSW and NSW distribution network service providers as expert advice in relation to the matters set out in this RFQ. The report should only rely on information or data that could be made reasonably available to the AER or others (including foot-noted items). The consultant is also required to:

- Document the methods, data, adjustments, equations, statistical package specifications/printouts and assumptions used in preparing your opinion
- Include specified wording at the beginning of the report stating that "[the person(s)] acknowledge(s) that [the person(s)] has read, understood and complied with the Federal Court of Australia's Practice Note CM 7, Expert Witnesses in Proceedings in the Federal Court of Australia" as if your brief was in the context of litigation
- Include specified wording at the end of the report to declare that "[the person(s)] has made all the inquiries that [the person(s)] believes are desirable and appropriate and that no matters of significance that [the person(s)] regards as relevant have, to [the person(s)] knowledge, been withheld"
- State that the person(s) have been provided with a copy of the Federal Court of Australia's "Guidelines for Expert Witnesses in Proceeding in the Federal Court of Australia" and that the Report has been prepared in accordance with those Guidelines, refer to Appendix 1 to these Terms of Reference or alternatively online at <http://www.federalcourt.gov.au/law-and-practice/practice-documents/practice-notes/cm7>.

Project Timelines

A brief containing as much of the analysis as possible is required by 16 December 2014 for review and comment by NNSW, with the final report required 23 December 2014.

Please note this specification is subject to change following legal review.

2) Contractual Terms and Conditions

Please note that our standard 'Conditions of Purchase' will apply should your quotation be accepted.

In addition Respondents are expected to comply with our Terms of Tendering and Statement of Business Ethics in preparing a quotation. These Conditions of Purchase, Terms of Tendering and Statement of Business Ethics can be viewed at website www.ausgrid.com.au.

3) Confidential information

a. This RFQ and any other information provided by NNSW during the RFQ process is confidential information and Tenderers must not disclose the contents of this RFQ or any other information provided by NNSW during the RFQ process, supply any information, make any statement or otherwise issue any document to any third party concerning this RFQ, whether for publication or transmission in any form or otherwise, without the prior written consent of NNSW.

b. NNSW will treat all Tenders and any supporting material provided with Tenders as confidential information and will not disclose their contents to any third party except those employees, agents and advisers of NNSW who have a need to know and access the confidential information for the purposes of evaluation of Tenders, negotiation of a Contract with any Tenderer and for any purposes reasonably ancillary to any products or services provided to NNSW by the Tenderer.

4) Response

a) Conflicts of Interest

Please state any circumstances, arrangements, understandings or relationships which constitute, or may reasonably be considered to constitute, an actual or potential conflict of interest with your obligations regarding the preparation of this quotation or supply of the goods and/or services subject to this RFQ. If no conflicts exist, please state *"There are no conflicts of interest to declare"*:

b) Respondent Information and Representations and Warranties

Respondent Name:		ABN:	
Address:			
Contact Numbers	Work:	Mobile:	Fax:
Email Address:			

I	______________________ (print name)	the undersigned represent and warrant that:
	(a)	I have complied with your Terms and Conditions of Tender;
	(b)	I have complied with your Statement of Business Ethics and NSW Code of Practice in preparing this quotation;
	(c)	Understand that if we are engaged by the Company to provide the Goods and/or Services we will: • comply with the Company's policies and procedures we are notified about, including the Alcohol and Other Drugs procedure; • provide evidence of Long Service Levy payment to the Company before commencing design or construction work. • Will hold and maintain relevant insurance cover for Workers Compensation, Public Liability and Professional Indemnity, with a reputable insurer. • Abide by all legislation as applicable.
	(d)	I have declared any conflicts of interest in accordance with Section 4)a) above;
	(e)	I am authorised to sign on behalf of the Respondent.
	(f)	I have maintained confidentiality of the process, information and documents obtained by Networks NSW.
Signature:		**Date:**

c) Respondent Experience

Briefly detail your organisation's ability and experience relative to the supply of services, with attachment of CVs.

d) Respondent Capability to meet required timelines

Briefly detail your organisation's ability to complete the analysis outlined in the scope of work, including detailed project milestones

e) Pricing Schedule

All pricing is to be provided on a GST exclusive basis in Australian dollars and the offer is to be valid for a period of 90 days after the Closing Date.

Total cost to deliver detailed report	$
All travel expenses are to be passed through at actual cost.	*Expected expenses*

f) Payment Milestone

Total Payment	23 December 2014 Upon acceptance final report.

g) Variations, assumptions or exclusions

Respondent to list any variations, underlying assumptions or exclusions that apply to the pricing listed in section "Pricing Schedule"

h) Respondent Agreement

I am authorised to provide this quotation on behalf of my organisation and confirm it is valid for 90 days from the date below

Respondent Name:	**ABN:**
Respondent Contact's Name:	
Respondent Contact's Title:	
Signature:	**Date:**

Appendix 1

FEDERAL COURT OF AUSTRALIA

Practice Note CM 7

EXPERT WITNESSES IN PROCEEDINGS IN THE FEDERAL COURT OF AUSTRALIA

Practice Note CM 7 issued on 1 August 2011 is revoked with effect from midnight on 3 June 2013 and the following Practice Note is substituted.

Commencement

1. This Practice Note commences on 4 June 2013.

Introduction

2. Rule 23.12 of the Federal Court Rules 2011 requires a party to give a copy of the following guidelines to any witness they propose to retain for the purpose of preparing a report or giving evidence in a proceeding as to an opinion held by the witness that is wholly or substantially based on the specialised knowledge of the witness (see **Part 3.3 - Opinion** of the *Evidence Act 1995* (Cth)).

3. The guidelines are not intended to address all aspects of an expert witness's duties, but are intended to facilitate the admission of opinion evidence[1], and to assist experts to understand in general terms what the Court expects of them. Additionally, it is hoped that the guidelines will assist individual expert witnesses to avoid the criticism that is sometimes made (whether rightly or wrongly) that expert witnesses lack objectivity, or have coloured their evidence in favour of the party calling them.

Guidelines

1. General Duty to the Court[2]

1.1 An expert witness has an overriding duty to assist the Court on matters relevant to the expert's area of expertise.

1.2 An expert witness is not an advocate for a party even when giving testimony that is necessarily evaluative rather than inferential.

1.3 An expert witness's paramount duty is to the Court and not to the person retaining the expert.

[1] As to the distinction between expert opinion evidence and expert assistance see *Evans Deakin Pty Ltd v Sebel Furniture Ltd* [2003] FCA 171 per Allsop J at [676].

[2] The "*Ikarian Reefer*" (1993) 20 FSR 563 at 565-566.

2. The Form of the Expert's Report[3]

2.1 An expert's written report must comply with Rule 23.13 and therefore must

(a) be signed by the expert who prepared the report; and

(b) contain an acknowledgement at the beginning of the report that the expert has read, understood and complied with the Practice Note; and

(c) contain particulars of the training, study or experience by which the expert has acquired specialised knowledge; and

(d) identify the questions that the expert was asked to address; and

(e) set out separately each of the factual findings or assumptions on which the expert's opinion is based; and

(f) set out separately from the factual findings or assumptions each of the expert's opinions; and

(g) set out the reasons for each of the expert's opinions; and

(ga) contain an acknowledgment that the expert's opinions are based wholly or substantially on the specialised knowledge mentioned in paragraph (c) above[4]; and

(h) comply with the Practice Note.

2.2 At the end of the report the expert should declare that "[the expert] has *made all the inquiries that* [the expert] *believes are desirable and appropriate and that no matters of significance that* [the expert] *regards as relevant have, to* [the expert's] *knowledge, been withheld from the Court*."

2.3 There should be included in or attached to the report the documents and other materials that the expert has been instructed to consider.

2.4 If, after exchange of reports or at any other stage, an expert witness changes the expert's opinion, having read another expert's report or for any other reason, the change should be communicated as soon as practicable (through the party's lawyers) to each party to whom the expert witness's report has been provided and, when appropriate, to the Court[5].

2.5 If an expert's opinion is not fully researched because the expert considers that insufficient data are available, or for any other reason, this must be stated with an indication that the opinion is no more than a provisional one. Where an expert witness who has prepared a report believes that it may be incomplete or inaccurate without some qualification, that qualification must be stated in the report.

2.6 The expert should make it clear if a particular question or issue falls outside the relevant field of expertise.

2.7 Where an expert's report refers to photographs, plans, calculations, analyses, measurements, survey reports or other extrinsic matter, these must be provided to the opposite party at the same time as the exchange of reports[6].

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3 Rule 23.13.

4 See also Dasreef Pty Limited v Nawaf Hawchar [2011] HCA 21.

5 The *"Ikarian Reefer"* [1993] 20 FSR 563 at 565

6 The *"Ikarian Reefer"* [1993] 20 FSR 563 at 565-566. See also Ormrod *"Scientific Evidence in Court"* [1968] Crim LR 240

3. Experts' Conference

3.1 If experts retained by the parties meet at the direction of the Court, it would be improper for an expert to be given, or to accept, instructions not to reach agreement. If, at a meeting directed by the Court, the experts cannot reach agreement about matters of expert opinion, they should specify their reasons for being unable to do so.

J L B ALLSOP

Chief Justice

4 June 2013

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Financial Risk Management News and Analysis

House of the Year, Australia – UBS

/asia-risk/feature/2301594/house-of-the-year-australia-ubs

18 Oct 2013, Asia Risk staff, Asia Risk

Fundamental changes in Australia's financial markets over the last year led to a switch in sentiment as investors began to look at taking more risk and shifting from credit to equity-linked products. In addition, despite the knock-on effects on Australia's commodity markets from China's economic slowdown, corporate hedging requirements remained substantial.

Due in no small part to the resources UBS could pull together both on the ground in Australia and across its global network, it was able to provide innovative solutions for investors as well as call on its experience to both advise, lead and execute major hedges for corporates. With regard to its hedging work with corporates, the bank was also able to act in the role of consultant, advising a major Australian corporate on its entire risk management policy, drawing on its long-standing market experience and deep-rooted client relationship to perform a task normally carried out by consultancy firms.

For Travis Miller, UBS's Sydney-based head of derivatives sales for Australia, the bank's local infrastructure gives it the ability to execute trades quickly and efficiently. This was a key differentiator for the bank to be able to capture the changing investor focus towards higher risk products.

"Eighteen months ago, term deposit rates were high and credit spreads were wide but over the last 12 months we've seen term deposits coming down and credit spreads coming in. Clients have been looking to replace that yield and one of the key avenues they've been looking at has been equity markets, by selling volatility to generate yield, looking at high yield stock outright or through equity-linked structures. The key thing is transition from pure yield strategies, to equity-linked, rather than credit-linked. The general trend now is clients taking more risk with more potential for upside," says Miller.

One way the bank sped up its clients' ability to trade was by listing parts of its Market Growth Instalments over-the-counter structured product on the Australian Securities Exchange (ASX) as warrants.

"This OTC option has been popular but it's lumpy and documentation-intensive and what we've done is taken some of the elements of the OTC transaction and list them on the ASX under the warrants category, just so it can be available to a broader client base," says Miller.

For hedging, UBS acted as the hedge co-ordinator for a major Australian commodity firm's offshore debt issuance in a series of cross-currency swaps that totalled around $2.35 billion across a series of tenors ranging from five to 10 years, as well executing a significant volume of the hedges themselves.

According to Josephine Napoli, Sydney-based executive director at UBS, the bank took an integral role in the process.

"The client wanted a very smooth process and asked us to co-ordinate the process on their behalf with all the counterparties. We helped them develop a hedge protocol, a term sheet and a pricing sheet and then ran the process on their behalf to make sure the hedging was executed smoothly and with no price slippage for the client," says Napoli.

UBS's derivative market expertise also led to the bank becoming an advisor on a major Australian corporate's risk management policy, which is revised on a four-yearly basis, says the firm's assistant treasurer.

"Where banks usually talk us through different strategies and structures for our derivatives, this policy actually governs what we can and cannot do, looking at our risk appetite overall. A consultancy would be suitable but we've found that for knowledge about derivative markets, banks are more advanced," says the assistant treasurer.

"We had a few banks we considered. We have a good relationship with UBS and their service is great. They're one of our top counterparties so we felt comfortable seeking their advice. The analysis was excellent. UBS considered a number of things we wouldn't have considered. Their accommodations were very much appropriate for us as a corporate and for our internal strategies," adds the assistant treasurer.

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House of the Year, Australia – UBS

Financial Risk Management News and Analysis

/asia-risk/feature/2215585/house-of-the-year-australia-ubs

18 Oct 2012, Asia Risk staff, Asia Risk

The Australian derivatives market continues to be characterised by aggressive competition between a handful of global dealers which maintain an onshore presence and the big four domestic banks, which are fixed income derivatives dealers in their own right. With a top tier position in equity derivatives across all customer segments, and acclaim from domestic corporates for a renewed effort in fixed income, UBS edged out its international rivals to win this year's award.

Against a backdrop of changing sentiment towards AUD/USD parity, expansionary monetary policy with 100bp of interest rate cuts from the Reserve Bank of Australia between May and October 2012 and domestic equity volatility that spiked as high as 43.93% at the beginning of the awards period, according to the S&P/ASX200 Vix, turbulence was again a feature of Australian risk markets during this awards period.

"In some respects, this year has been a continuation of last year - it's been just as turbulent in core financial markets over the past 12 months and strategies to manage or exploit persistent volatility have been the overarching theme," says Travis Miller, head of Australia derivatives sales at UBS. "Given that context, certain products are sub-optimal from a cost perspective and we have been focusing on more efficient products to ensure that clients get the right solution, often relatively less complex products that are less labour and capital intensive."

Commitment to the jurisdiction among the global banks was a key factor this year. While some of the domestic market's leading players reduced headcount and offshored key functions as part of wider Asia-Pacific job cuts, most notably last year's winner Deutsche Bank and Bank of America Merrill Lynch, the Swiss bank maintained its onshore derivatives headcount amid reduced transaction volumes.

Although the UBS team admit there are less transactions being done overall, they are happier doing a larger proportion of the smaller volume. Indeed, an increased market share amid thinner volumes can bring additional benefits to clients if the bank is able pass on the most recent market information. "The importance of a full-service model cannot be underestimated. It's our view that face-to-face relationships are key, and that success across asset classes is not a function of a meeting and a pitch book," Miller says.

Despite UBS Australia's resistance to industry downsizing across the region, however, it remains to be seen how long the bank can maintain its full-service capacity onshore, especially in light of comments from its global headquarters that it plans to dramatically reduce investment banking capacity, and headcount, before the end of 2013.

In the meantime, the bank's Australian clients stand to benefit from the Swiss banking regulators' proactive stance towards bank capital and risk-weighted assets. The Swiss Financial Market Supervisory Authority (Finma), in association with the Swiss National Bank and Federal Department of Finance, have set the fastest pace in moving to Basel III models among global regulators. Under Swiss rules, both UBS and Credit Suisse will likely hold total capital of around 18% of risk-weighted assets after they have both divested assets.

As a result, although it is considered top-three for pricing across major asset classes, the bank is not always able to show the most economic pricing.

The bank deployed a variety of approaches to increase market share within the major customer segments. For example, it built on its traditional strength in structuring and pricing equity-linked products for private wealth managers with enhancements to its daily pricing and liquidity platform, while for institutional clients it serviced increased demand for bespoke structured solutions from pension funds, insurance companies and asset managers.

"The ever-changing regulatory environment is driving many institutional clients to re-evaluate how they risk-manage existing portfolio exposures, with a new focus on liquidity and transparency. The way we engage this customer base has changed from a product-driven approach. We now have a suite of building blocks, and it's a matter of using the basic building blocks to meet the clients' outcomes and requirements," says Stuart Trueman, executive director and head of structured derivatives at UBS.

For example, UBS has established a dedicated cross-asset class derivatives team that works exclusively on private side transactions. In collaboration with senior relationship bankers, the team's role is to provide bespoke derivatives to UBS's corporate client base.

Over the awards period, noteworthy private transactions include utilising equity derivatives to both establish strategic economic holdings and risk-manage existing holdings. By embedding optionality and leverage into these structures, the bank has been able to improve the economics for its clients, reducing the price at which a position is acquired or increasing the price at which an existing holding is hedged or disposed of.

With Swiss banks relatively further down the regulatory capital path than their European and US counterparts, UBS says it has gained both forex and rates market share driven by its early transition to Basel III models and pricing. Rather than simply executing forex business, the bank has worked with a number of corporates to rework their entire hedge policy framework; in one detailed case, updating the policy to reflect not just liquidity impacts and changed volatility but also to incorporate ratings and covenant trigger scenario analysis.

Customisation has been a key feature of the bank's corporate derivatives business. Andrew Brown, head of corporate derivatives, says that corporate clients are too worried about the impact of new regulation on their risk management operations, while volatility continues to be a major concern. "The analysis and discussion we have with corporate clients on the private side has become a much wider piece of analysis about the impact of market volatility or regulatory change causing larger bottom line impact, although ultimately the client may end up electing to hedge with vanilla contracts. The discussions around what could go wrong are much deeper," he says.

The move away from derivatives following the global financial crisis has hamstrung non-UK inflation-linked markets. As one of the few banks with a dedicated inflation trader that sits in Sydney, UBS was able to source an exposure that is not freely available in the market. "We structured a year-on-year inflation product where the client would effectively pay us where inflation set each year plus a spread," Brown says.

With few domestic inflation-linked instruments to choose from, hedging the position required a counterparty with sophisticated structuring expertise and an appetite to risk-manage a relatively large exposure to inflation. UBS's pedigree in the global inflation derivatives market gave it a competitive edge in both regards. "It is possible to hedge domestic inflation using inflation-linked bonds or nominal bonds plus swaps, but the second-order convexity risks are hard to manage. If the bank's inflation-linked book is big enough, the risk associated with a structured solution like this can be managed as a residual risk," Brown says.

In the institutional market, UBS has placed an increased focus on the needs of alternative asset managers with liquid, transparent, cost-efficient and non-discretionary exposures that are uncorrelated from traditional asset classes. Leveraging its proprietary strategies' index capability, which it launched in 2005, UBS was engaged by the Australian branch of a large global alternative asset management business to provide these indexes in unfunded swap format, creating a liquidity buffer within the fund whilst providing full portfolio attribution and limiting performance drag typically associated with a cash holding. The manager in turn utilised these indexes to provide liquidity and flexibility to a domestic multi-strategy alternatives allocation fund.

The bank's clients recognise the benefits of the bank's continued effort to understand their individual requirements and offer tailored, well-priced solutions. "Although it has taken a few years for the bank to understand our specific risk management needs, this year has seen a notable improvement in the level of service we get from UBS. They continue to invest in good people and expand their service and that has made the difference," says a senior treasury official at a leading Australasian airline.

A treasury official at a domestic property developer which has traded more than A$100 million ($102 million) of interest rate swaps with the bank reiterates this point. "Based on its willingness to understand our business and offered tailored solutions, UBS is an outstanding performer in our dealer groups. The UBS teams goes that little bit further," he says.

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