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3RS consultancy study
Detailed funding plan for 3-Runway System (3RS) at HKIA
– Financial advisor

Prepared by: The Hongkong and Shanghai Banking Corporation Limited ("HSBC")

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Table of abbreviations

3RS	3-Runway System
AAHK	Airport Authority Hong Kong
ACF	Airport Construction Fee
AUD	Australian Dollar
CAD	Canadian Dollar
Capex	Capital Expenditure
CHF	Swiss Franc
CIRR	Commercial Interest Reference Rate
CNH	Offshore Chinese Yuan
CNY	Onshore Chinese Yuan
CPI	Consumer Price Index
ECA	Export Credit Agency
EP	Equator Principles
ERM	Environmental Resources Management
ESMP	Environmental & Social Management Plan
ESMS	Environmental & Social Management System
EUR	Euro
Fed	Federal Reserve
Fitch	Fitch Ratings
FX	Foreign Exchange
FY	Financial Year
GBP	British Pound
HIBOR	Hong Kong Inter-bank Offered Rate
HKD	Hong Kong Dollar
HKG	The Government of the Hong Kong SAR
HKIA	Hong Kong International Airport
HKMC	The Hong Kong Mortgage Corporation Limited
HSBC	The Hongkong and Shanghai Banking Corporation Limited
HSBC 2011 Report	HKIA Airport Master Plan 2030 Financial Feasibility Assessment – Financial Advisor Report in 2011
HSBC 2015 Report	3RS Consultancy Study, Financial Arrangement for 3RS at HKIA – Financial Advisor Report in 2015
ICMA	The International Capital Market Association
ISDA	International Swaps and Derivatives Association
JPY	Japanese Yen
LIBOR	London Inter-bank Offered Rate
Moody's	Moody's Investors Service
MP2030	Master Plan 2030
MTN	Medium Term Notes

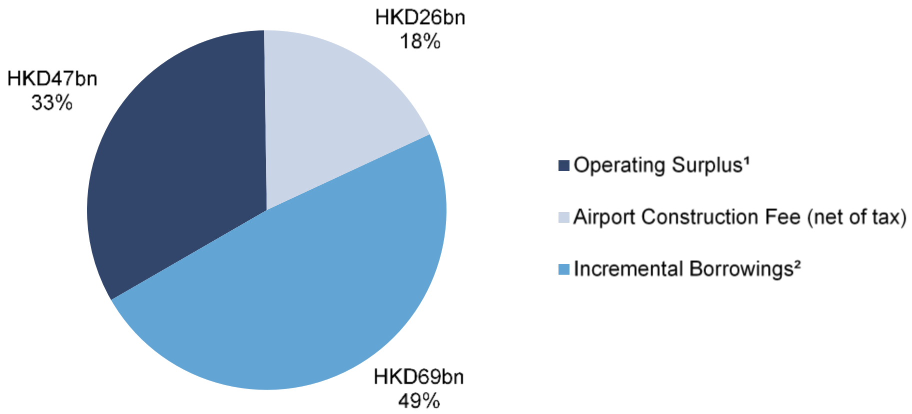
MTR	MTR Corporation Limited
S&P	Standard & Poor's
SGD	Singapore Dollar
T-Lock	US Treasury-Lock
USD	United States Dollars
UST	US Treasury

1. Executive Summary

1.1 Introduction and background

The Airport Authority Hong Kong ("AAHK") released the financial arrangement plan for the three-runway system ('3RS") in 2015, which showed the capital cost of HKD141.5bn for the 3RS project would be financed through a combination of (i) AAHK's operating surpluses, (ii) a new Airport Construction Fee ("ACF") levied on passengers and (iii) incremental borrowings.

Chart 1 – Capital cost funding breakdown



Notes:
1. Operating Surplus excludes ACF but includes financing costs on all debt and changes in working capital
2. Incremental Borrowings = Max. Debt - Existing Debt Level

The numbers above are subject to rounding.

Source: Source: AAHK, 3RS Consultancy Study: Financial Arrangement for Three-runway System (3RS) at HKIA – Financial Advisor Report, HSBC (2015)

Construction of the 3RS project commenced on 1 August 2016. Collection of the ACF commenced on the same day.

In December 2016, AAHK appointed HSBC as financial consultant to study the detailed funding plan for 3RS. The scope of the financial consultant's study is to analyze different debt structures and identify different forms of financial instruments in both the bank loan and capital markets, and make detailed recommendations on the use of instruments (in relation to timing, size, tenor, etc.) that would enable AAHK to raise the HKD69bn of incremental debt required to finance the 3RS project in the most optimal manner. This paper sets out the results of the detailed funding plan study.

1.2 Key funding objectives and approach

HSBC has worked with AAHK to identify key objectives of the funding plan and lay out key principles when developing the detailed funding plan. HSBC recommends to focus on the following key principles in AAHK's funding approach:

- Examine all potential sources of financing and retain ability to access all key funding sources, including keeping AAHK's Medium Term Note programme up to date with appropriate size, maintaining at least 1 rating from S&P, Moody's or Fitch, facilitating best access to commercial bank funding by preparation for compliance with the Equator Principles and developing a green bond framework
- Have flexibility in the funding plan to handle uncertainties by maintaining sufficient committed undrawn bank facilities to handle any potential unforeseen funding requirements
- Optimise the cost of debt while considering other key objectives including certainty of debt financing, minimisation of refinancing risk and diversity of funding sources
- Raise debt with tenors consistent with AAHK's funding needs and potential repayment cash flows
- Mitigate interest rate and foreign currency risks by having appropriate policies in place

1.3 Analysis of available funding sources

Given AAHK's strong credit profile as well as supportive market conditions, HSBC expects there to be strong demand from the debt market for AAHK credit, with total debt market capacity expected to be substantially in excess of AAHK's funding requirements. Within the debt markets, HSBC believes that the following sources of debt financing would be central to AAHK's funding plan:

- **HKD loans:** The HKD loan market represents a natural and established source of debt financing for AAHK. Liquidity in this market is currently very strong with HKD349bn of loans executed in the Hong Kong market in 2016 and HKD269bn in 1H 2017. Tenors in the HKD loan market are typically up to 5 years. Whilst large transactions in the order of HKD25bn are possible for top borrowers, up to HKD10bn would be a more typical size for a single loan. Many international commercial banks including many of AAHK's key relationship banks are committed to meeting the environmental and social obligations laid out under the Equator Principles ("EP"). In order to ensure the widest support from the commercial bank market, AAHK has taken the necessary steps to facilitate EP banks to be in compliance with the EP, including the engagement of ERM to conduct an EP review.
- **USD institutional bonds:** The USD market represents the largest bond market, offering substantial liquidity from both US as well as international investors. USD bond issuance in Asia ex-Japan totalled HKD1,416bn equivalent in 2016 and HKD1,175bn equivalent in 1H 2017. Given the liquidity in this market, as well as the longer tenor debt financing available, which helps reduce refinancing risk, USD bonds are anticipated to be a core element of AAHK's funding plan. Typical issuance sizes for a corporate USD institutional bond issuance would be in the range of USD350m-1.5bn, with tenors up to 30 years being achievable. Given AAHK's pledge to make the Hong Kong International Airport ("HKIA") the world's greenest airport and the investments planned to deliver environmental benefits, AAHK can issue some bonds in green format to achieve competitive pricing, broaden their investor base and promote AAHK's and Hong Kong's commitment to sustainability.
- **HKD retail bonds:** A HKD retail bond offering from the AAHK would offer the benefit of public engagement as it would provide an opportunity for local investors to participate in the AAHK business and the 3RS project. This benefit would however need to be considered alongside the higher interest costs associated with a retail bond which is more expensive than borrowing from the bank or institutional bond market.
- **HKD institutional bonds:** There is an established HKD bond market, albeit more limited in depth compared to USD institutional bonds. Issuance sizes are typically up to HKD5bn, with tenors up to 15 years.

Other developed institutional bond markets also exist in other currencies which AAHK can tap into at times when their pricing, swapped back into HKD is attractive. AAHK can also consider the potential benefits of export credit agency ("ECA") supported financing and compare its relative funding cost to commercial bank loans and bonds.

1.4 Financial risk management analysis

When designing the funding plan, the following financial risks should be considered:

- Risk that the financing to complete the project is not available or is only available at significantly higher cost than expected
- Risk in the event that benchmark rates to which the cost of financing is linked and/or credit spreads increase during the financing period
- Interest rate exposure arising from floating rate debt instruments
- Foreign currency exposure arising from any debt not denominated in HKD

The financial risks can be mitigated in a number of ways. In assessing whether such mitigation should be pursued, AAHK should consider current and projected market conditions including forecasted interest rate, spread and foreign currency movements, as well as the costs associated with such mitigation.

The risk that funding is not available at an acceptable cost can be mitigated by securing funding or funding commitments in advance of when the debt is actually required. This can be achieved in either the bond or loan markets, though securing such funding or funding commitments will incur a cost.

In the bond markets, bonds can be issued earlier in advance of when the debt is required. This provides certainty on the availability and cost of debt, which can be lower compared with issuing a bond in the future if interest rates are expected to rise. However, these benefits will need to be assessed against the cost of negative carry i.e. the additional net interest expense which AAHK will incur by raising the debt earlier than needed. Based on HSBC's analysis, which takes into account current market projections for interest rates and credit market conditions, there is no compelling case at the moment for raising debt substantially in advance of when it is forecasted to be required.

In the loan market, funding commitments can be secured from banks, with debt only being drawn when required. A commitment fee is payable on the undrawn portion of the facility. However, as this fee will be less than the margin payable on the drawn portion, the overall cost is reduced compared with raising the full debt amount upfront. Given AAHK's strong credit, its ability to access the market based on ongoing cashflows, the size of the 3RS required financing and the length of the construction period, it would not be necessary nor economical to secure commitment for the whole debt amount. However, AAHK should maintain sufficient undrawn funding commitments to provide liquidity for any unforeseen circumstances, e.g. changes in timing of 3RS capital expenditure, variations in actual cashflows of AAHK versus plan and/or disruptions to the debt markets.

Derivative instruments such as T-lock are available to "lock in" benchmark rates in advance of an actual debt raising. These may be considered in an environment when interest rates are expected to rise above the rates that can be locked in via T-locks.

For managing interest rate exposure, AAHK's current policy is to ensure that 40% to 60% of its borrowings are effectively on a fixed rate basis. In view of the substantial amount of debt to be raised for the project, the long tenor involved for some of the borrowings and AAHK's revenues have no obvious link to interest rate, HSBC recommends AAHK to consider maintaining a higher proportion of borrowings to be effectively on a fixed rate basis, with inclusion of an absolute allowance for unhedged debt. Interest rate swaps or interest rate caps could be used to manage interest rate exposure.

Given that AAHK's revenues are expected to be substantially denominated in HKD, and the financing plan contemplates raising a component of debt in USD, AAHK may be exposed to foreign currency risk. This risk is substantially mitigated by the peg between USD and HKD, and HSBC recommends AAHK to consider further managing the volatility of FX rates fluctuations through currency derivatives such as forwards, cross currency swaps and FX options. HSBC views it to be more prudent to remove residual FX risk for any significant amount over long period of time.

When considering or reviewing the financial risks management policies, key factors would include risk tolerance, market volatility, cost and effectiveness of different hedging instruments and their liquidity, maximum tenor for hedging, and accounting and tax implications. The risk management policies and their implementation should be formulated and monitored by AAHK's senior management, together with input from external and professional parties where appropriate, and be reviewed on periodic basis in response to a changing external environment.

AAHK has ISDA documentation in place to be able to access the market to enter into appropriate hedging instruments as required.

For the execution of any hedging strategy for substantial amount, and especially for longer tenor, a well thought-through and flexible plan should be formulated in advance. Any execution plan should aim to minimise the adverse impact of the hedging activities on market prices and achieve the desired outcome efficiently at the lowest achievable cost possible.

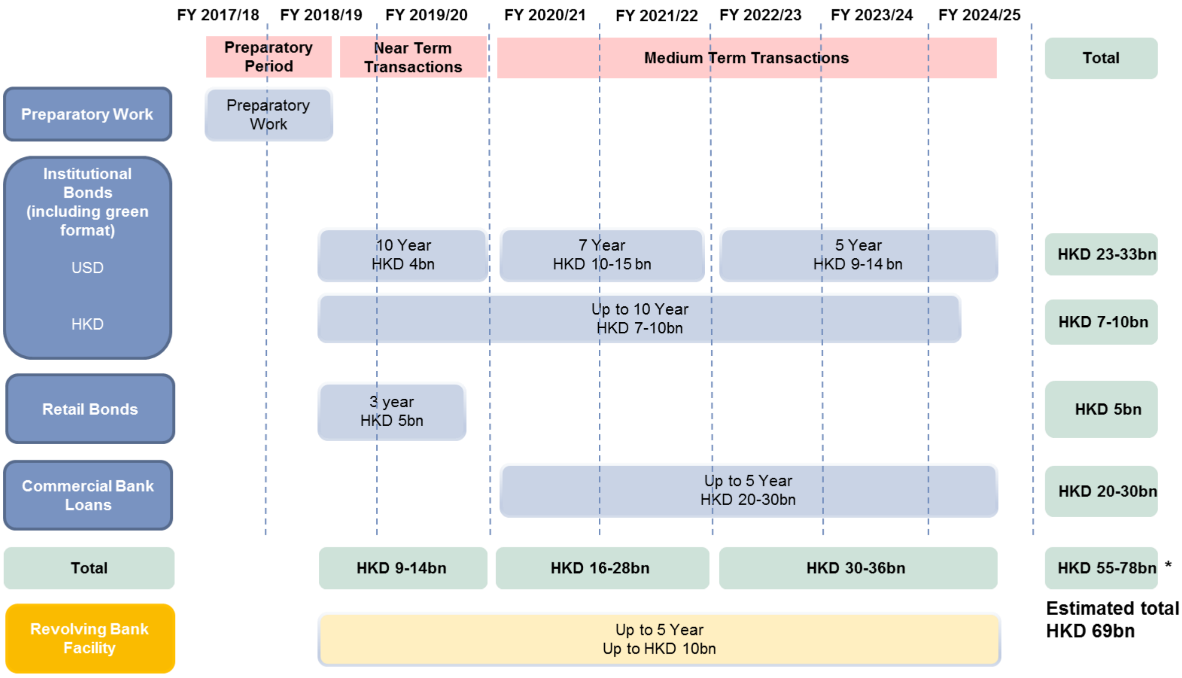
1.5 Funding plan recommendations

The funding plan should be dynamic in nature, reviewed regularly and adjusted as required to best meet the AAHK's objectives given the market situation at the time.

Based on prevailing assumptions as well as an assessment of the current market conditions, HSBC would recommend AAHK to raise debt closer to the time when projected to be required. The overall funding plan is summarised in the schematic graph below, with the following key characteristics:

- USD bonds (including green bonds) and HKD loans represent the largest financing sources in the funding plan due to the depth of both markets compared to other debt sources
- The amount of retail bond has been limited by its higher cost compared to other sources of debt and market capacity
- The size range budgeted for HKD bond market reflects the smaller market capacity of this instrument compared to USD bonds and HKD loans
- To avoid the need of refinancing during 3RS construction period, longer dated USD bonds are placed earlier in the funding plan. This is followed by shorter tenors in the medium term to create an amortising repayment profile that best matches the cash flows post 3RS completion. As most of HKD loans market appetite lies for tenor within 5 years, HKD loans are placed in the plan only starting from FY2020/21 to minimise refinancing risks

Chart 2 – Funding plan for AAHK



Note:

(1) Revolving bank facilities serve to provide liquidity only and do not form part of the core debt funding required for 3RS.

(2) HKD 55-78bn represents the summation of the lowest and highest range of each debt instrument type.

Ranges are used to indicate potential issuance sizes for each debt instrument to provide flexibility for AAHK to optimise the choice of instruments closer to the time of issuance as market conditions and relative terms of different instruments would vary from time to time. The total aggregate debt issuance across all instruments in the recommended funding plan is not expected to exceed the debt requirement to fund 3RS.

Given AAHK's strong access to debt markets, HSBC is confident that AAHK will be able to raise the required incremental debt of HKD69bn on reasonable terms and that the recommended detailed funding plan is robust and practicable.

2. Background of Detailed Funding Plan Study

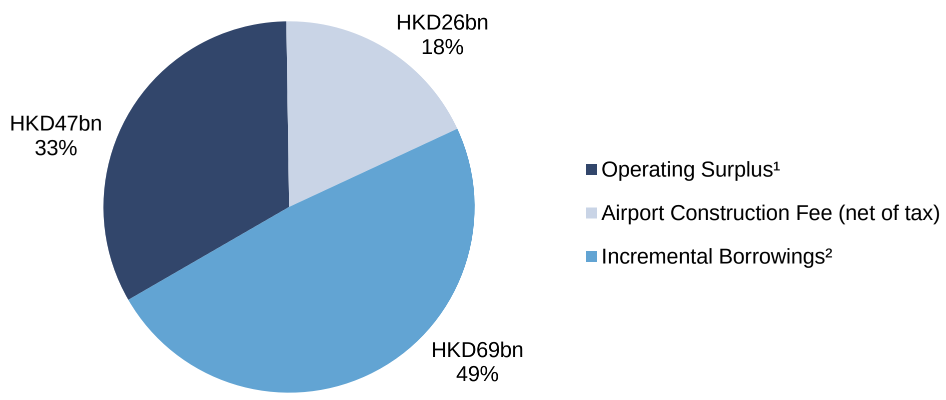
2.1 3RS project and previous studies

Since its opening at Chek Lap Kok in 1998, HKIA has grown to become one of the busiest airports in the world. In 2016, the airport served 70.5 million passengers, handled 4.52 million tonnes of cargo and accommodated 412,000 air traffic movements.

In 2010, AAHK prepared the Master Plan 2030 ("MP2030") which examined both maintaining the existing 2-runway system and expanding into a 3-runway system ("3RS") as HKIA was projected to reach full capacity. The Hongkong and Shanghai Banking Corporation Limited ("HSBC") was appointed by AAHK as Financial Advisor and issued a report named "HKIA Airport Master Plan 2030 Financial Feasibility Assessment – Financial Advisor Report" in 2011 ("HSBC 2011 Report") which compared the relative financial feasibility between the 2-runway system and 3-runway system scenarios on the basis of AAHK's prevailing financial position at that time. After the MP2030 study, based on AAHK's recommendation and feedback from the public consultation, the Executive Council gave its in-principle approval in 2012 for AAHK to proceed with the planning related to the development of 3RS.

After the 3RS scenario was determined as the preferred development option for HKIA, HSBC was appointed by AAHK in 2013 to prepare the financial arrangement plan required to implement the 3RS project. Following the study, HSBC issued the "3RS Consultancy Study, Financial Arrangement for 3RS at HKIA – Financial Advisor Report" in 2015 ("HSBC 2015 Report") to report the results of our assessment and recommended financial arrangement plan. The 3RS project involves the reclamation of approximately 650 hectares to the north of the existing airport island and construction of a third runway and its associated concourses and infrastructure facilities (including T2 expansion, airside concourse, automated people mover, baggage handling system, road infrastructure, etc.) to cater for long-term passenger and cargo traffic demand. The financial arrangement plan showed the capital cost of HKD141.5bn (in money-of-the-day prices) for the 3RS project could be financed through a combination of AAHK's operating surpluses, an Airport Construction Fee ("ACF") levied on passengers and incremental borrowings.

Chart 3 – Capital cost funding breakdown



Notes:
1. Operating Surplus excludes ACF but includes financing costs on all debt and changes in working capital
2. Incremental Borrowings = Max. Debt - Existing Debt Level

The numbers above are subject to rounding.

Source: Source: AAHK, 3RS Consultancy Study: Financial Arrangement for Three-runway System (3RS) at HKIA – Financial Advisor Report, HSBC (2015)

The financial arrangement plan does not include any form of financial backing or guarantees to be provided by the Hong Kong Government for the financing of the 3RS.

Construction of the 3RS project commenced on 1 August 2016. Collection of the ACF commenced on the same day.

2.2 Scope of detailed funding plan study

In December 2016, AAHK appointed HSBC as financial consultant to study the detailed funding plan for 3RS. The scope of the study is to analyse potential sources of funding, different debt structures and identify different forms of financial instruments, including loans and bonds, in both the commercial bank and institutional capital markets and make detailed recommendations on the use of these instruments (in relation to timing, size, tenor, etc.) that would enable AAHK to raise the HKD69bn of incremental debt required to finance the 3RS project in the most optimal manner.

This report sets out the results of the detailed funding plan study.

3. Key Funding Objectives and Approach

3.1 Key funding objectives

HSBC recommends the key objectives of the funding plan to include:

- Ensuring that sufficient debt financing is available to meet the funding required for 3RS
- Raising debt on cost effective terms
- Ensuring efficient cash management to minimise “negative carry” while maintaining prudent liquidity
- Diversifying sources of debt financing so as to reduce over-reliance on a single funding source
- Minimising “refinancing risk”, especially the amount of debt that is required to be repaid prior to completion of the 3RS project
- Retaining flexibility to refinance / pay down debt post completion in the event AAHK wishes to reduce leverage at that time
- Reducing exposure to interest rate volatility at reasonable cost
- Minimising foreign exchange risk at reasonable cost

HSBC’s recommended approach to achieve these objectives is as follows:

- Examine all potential sources of financing, including institutional bonds (including green bonds and sukuk), retail bonds, bank loans (straight commercial bank loans [and export credit agency supported loans]) and hybrid capital across a range of currencies and tenors. The funding plan should also consider how public participation in the 3RS investment can also be efficiently incorporated into the plan.
- Raise debt from sources and on terms that result in (i) debt tenors consistent with AAHK’s investment plans and funding needs, (ii) cost effective financing for AAHK, (iii) flexible terms recognising the uncertainties of a project of the scale and complexity of 3RS. Funding to be raised by a competitive procurement process in line with AAHK’s internal management procedures.
- Retain flexibility to adapt to changing market conditions, timing of approach to market and unexpected events at AAHK including the need to raise additional funding if required, e.g. by ensuring sufficient headroom under the debt capacity of AAHK, retaining sufficient committed but undrawn facilities and ensuring that a current multi-currency Medium Term Notes (“MTN”) programme is in place
- Actively manage relationship with relevant rating agencies, investors and banks to ensure the strength of AAHK business is well understood

  Key components of this recommended approach are described below.

3.2 Approach to developing the funding plan

3.2.1
Ability to access all key funding sources

HSBC recommends that the AAHK actively manages its relationship with debt providers to ensure that it retains the ability to access all key funding sources such as the loan and bond markets in a timely fashion. This will allow AAHK to better manage financing and liquidity risks, for example arising due to changes in the 3RS capex schedule or to projected operational cashflows, as well as handle potential disruptions in any particular debt market. Being ready to easily access the debt markets also allows the AAHK to exploit any financing opportunities if and when they arise.

To retain such access, HSBC recommends:

- Ensuring that its current Medium Term Note programme is kept up to date and is suitably sized
- Maintaining at least one rating from S&P / Moody's / Fitch
- Preparing information to support commercial bank's confirmation of compliance with the EP
- Preparing necessary green bond framework and guidelines such that external review work can be completed and AAHK to be ready to issue bonds in green format.

3.2.2
Flexibility to handle the uncertainties in the 3RS programme

The construction period is estimated to be 8 years and during this period there will likely be deviations to the capital expenditure programme, both in terms of the timing and spend. This, in turn, will result in variations to the projected annual debt requirement. In order to ensure that the construction can proceed uninterrupted, the funding plan should be able to accommodate any variations and provide certainty of funding as and when it is required.

In addition to retaining timely access to the key debt markets as highlighted above, HSBC recommends that the AAHK has sufficient committed, undrawn bank facilities available to handle any potential unforeseen funding requirements. The size of the undrawn facilities maintained should be reviewed on a regular basis taking into consideration projected upcoming debt requirements and market conditions.

3.2.3
Optimising cost of debt

The cost of debt will be a key driver of the funding plan. In optimising the cost of debt, a number of factors will need to be considered:

- Type of debt instrument: The absolute and relative costs of different debt instruments will vary with time and will be a key factor in determining which debt markets to access
- Debt tenors: Typically longer tenor debt is more expensive but reduces refinancing risk
- Interest rate: The interest rate environment will be a key driver of the overall cost of debt. This includes both floating rate benchmarks such as Libor and Hibor, as well as government benchmark rates
- Negative carry: The net incremental costs of raising debt before funds are required to be disbursed to meet costs. Debt sources with flexible drawdown features and low commitment fees will be important.

3.2.4
Managing debt maturities

HSBC recommends that the AAHK actively manages its debt maturities in order to minimise refinancing risk whilst ensuring that debt can be repaid as and when cashflows allow.

In order to minimise refinancing risk, the funding plan should ensure that the quantum of refinancing required in any particular year is manageable and comfortably within estimated market liquidity. Where possible, avoiding any refinancing requirement prior to completion of the 3RS project would further reduce the overall level of refinancing risk and reduce the need to raise further debt above what is needed to fund the 3RS construction.

At the same time, the funding plan should also allow for debt to be repaid as soon as cashflows allow in order to avoid unnecessary negative carry costs. Debt maturities and potential early prepayment penalties should be considered when developing the funding plan.

The issues raised in 3.2.1 through 3.2.4 are discussed in more detail in section 4 of this Report.

3.2.5 *Mitigation of interest rate and foreign currency risks*

Debt raised by AAHK gives rise to interest rate risk. Floating rate debt exposes the AAHK to cash flow interest rate risk. Given the large quantum of debt required to be raised for the 3RS and AAHK's revenues have no obvious link to interest rate, HSBC recommends AAHK to consider maintaining a higher proportion of borrowing effectively on a fixed rate basis to reduce cashflows volatility, either through the contractual terms or through the use of interest rate risk management products including swaps, to be more prudent.

The funding plan should consider the overall interest rate risk profile of the debt raised in order to ensure it complies with AAHK's policies. Where hedging is required, then the implications of this, for example in terms of costs, should be included when assessing each debt raising exercise.

It is AAHK policy to require all major operational contracts to be denominated in HKD. As a result, any debt raised in foreign currency will give rise to foreign currency risk. The funding plan should consider the overall foreign currency risk profile of the debt raised in order to ensure it complies with AAHK's policies and risk appetite. See Section 5 for a detailed description.

4. Analysis of Available Funding Sources

4.1 Overview of current debt markets

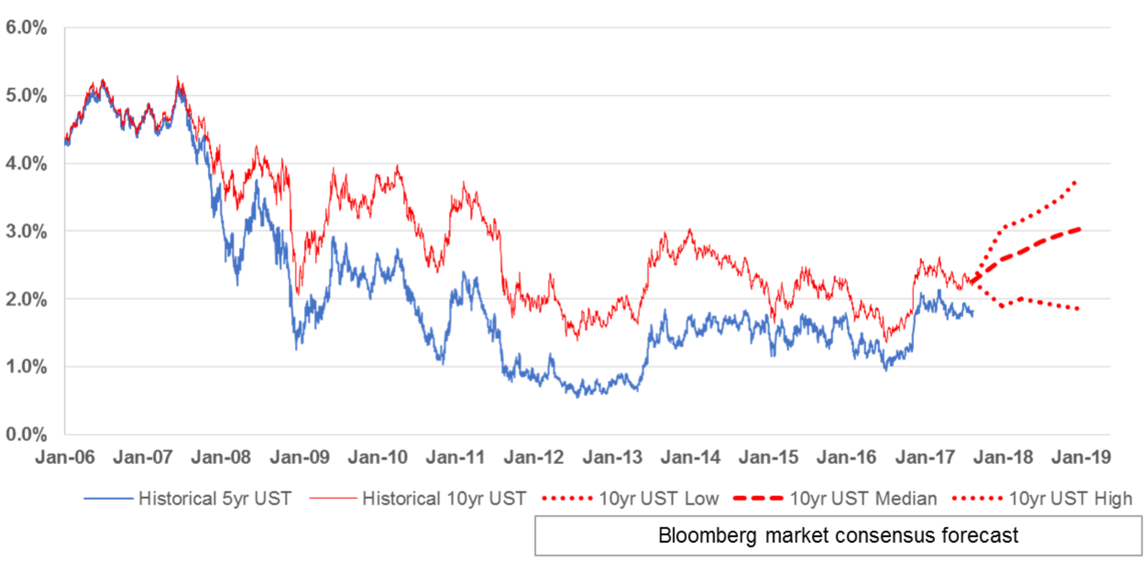
Since the global financial crisis of 2008/09 many central banks of major economies (including the US Federal Reserve) injected substantial funds into the financial markets by the purchase of securities (generally referred to as Quantitative Easing or QE) to restore market stability resulting in a prolonged period of low interest rates and strong financial market liquidity.

Whilst central banks have indicated intentions to reverse QE in a managed way over the coming years, debt market conditions continue to be constructive supported by continuing low interest rates and the relatively benign macro-economic environment.

Financial markets remain exposed to the impact of political and macro events (headline events last year such as Brexit and the US elections, recent political tensions in North Asia, specific macro conditions in certain European economies in 2010/11 and the prospects for continued growth in China, all being notable examples). However, markets have remained generally open and strong. Regulators have also continued to demonstrate their willingness to support economic growth through policy measures.

Against this backdrop, liquidity in the Asia-Pacific debt markets, including the bank loan and institutional bond markets, has been evidenced by total volumes of capital raised in 2017 set to match or exceed the volumes recorded in 2016.

Chart 4 – US treasuries rates (historical and market forecast)



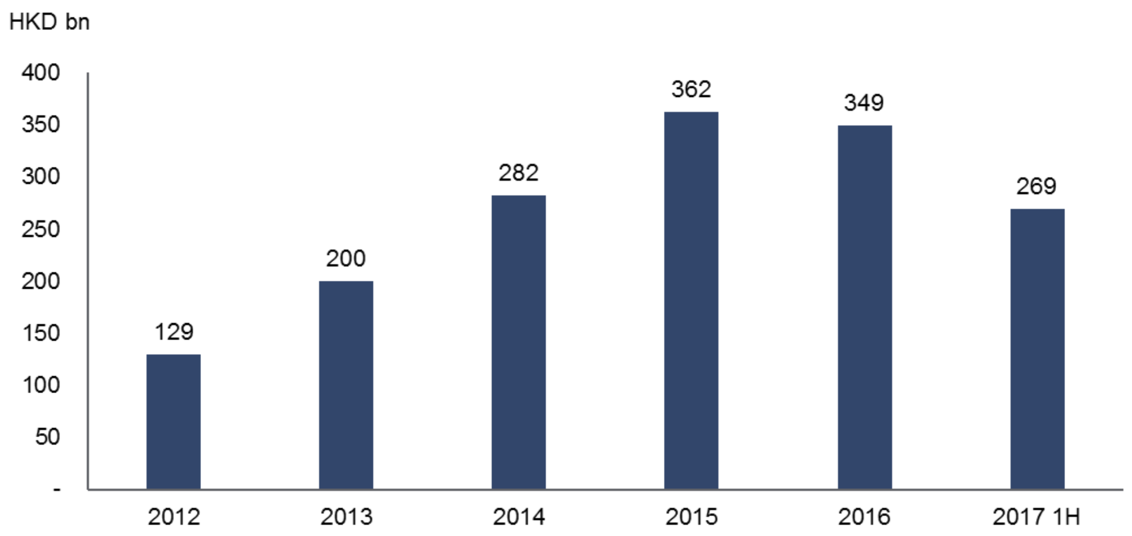
Source: Bloomberg as of 22 August 2017

4.2 Commercial bank loans

4.2.1 Market Access

Liquidity in the HKD loan market in Hong Kong has remained high with volumes of HKD349bn in 2016 and HKD269bn in 1H 2017 which represents a very active market this year. Banks continue to be highly liquid and the market competitive which has resulted in pricing trending downwards in 1H 2017, though this is expected to moderate going forwards.

Chart 5 – HKD loan volume in Hong Kong 2012 to 1H 2017



Source: Thomson Reuters, Loanconnector

Banks are expected to have strong appetite to lend to AAHK. Tenors up to 5 years remain widely accepted in Hong Kong syndicated corporate loan market.

The table below shows some selected recent HKD loan transactions, which demonstrates that the HKD loan market offers deep liquidity to borrowers and there have been precedents that high grade issuers can tap the market with loan size over HKD20bn in a transaction.

Chart 6 – Selected recent HKD loan transactions

Date	Borrower	Size (HKDm)	Tenor (years)	Type	Sector
17-Mar-17	Sun Hung Kai Properties	22,000	5.0	Club Deal	Real Estate
15-Mar-17	AS Watson Asia	9,500	3.0	Club Deal	Retail & Supermarkets
27-Jan-17	Castle Peak Power Co Ltd	4,300	5.0	Club Deal	Utilities
25-Jan-17	K Wah Financial Services	8,000	5.0	Syndication	Real Estate
10-Aug-16	Fortune REIT	4,500	5.0	Club Deal	REIT
13-Jun-16	MTR	25,000	3.0 & 5.0	Syndication	Transportation
12-May-16	Langham Hospitality	7,200	4.0	Syndication	Hotel
10-Mar-16	Sun Hung Kai Properties	15,000	5.0	Club Deal	Real Estate

Source: Thomson Reuters, Loanconnector

Assisting international commercial banks to confirm that financing the 3RS is in compliance with the EP is important. 90 financial institutions from 37 countries have adopted the Equator Principles, an internationally accepted risk management framework for determining, assessing and managing environmental and social risks in new projects. EP consists of 10 key principles for assigning a rating for the project, ensuring there is proper environmental and social management plan in place and continuous independent monitoring. Many of AAHK's key banking partners are amongst the banks that have adopted EP. Hence in order to ensure that commercial bank loans can be raised, AAHK has and continues to prepare the necessary materials and information for banks to review. ERM has completed an EP review to assist EP banks in confirming compliance with EP.

4.2.2
Terms and conditions

Bank loans are available as term loans or revolving loans. Both typically offer prepayment option with no prepayment fee, which can offer more flexibility for AAHK to prepay if operating cashflows turn out to be better than projected after 3RS completion. Revolving loans can provide flexibility in drawdown timing at a small commitment fee, which can provide buffer in case 3RS capital expenditure is faster than scheduled or if the capital markets are disrupted or unattractive for a period of time.

Chart 7 – Term Loan vs. Revolving Loan

	Term Loan	Revolving Loan
Drawdown	Bullet / Phased	Flexible
Commitment Fee	No / Yes	Yes, on undrawn amount
Market Appetite	Up to HKD 25bn in a single transaction	
Interest Rate	HIBOR + Margin	
Typical Tenor	Sweet spot pricing up to 5 years	
Prepayment	No penalty if made on interest payment date	

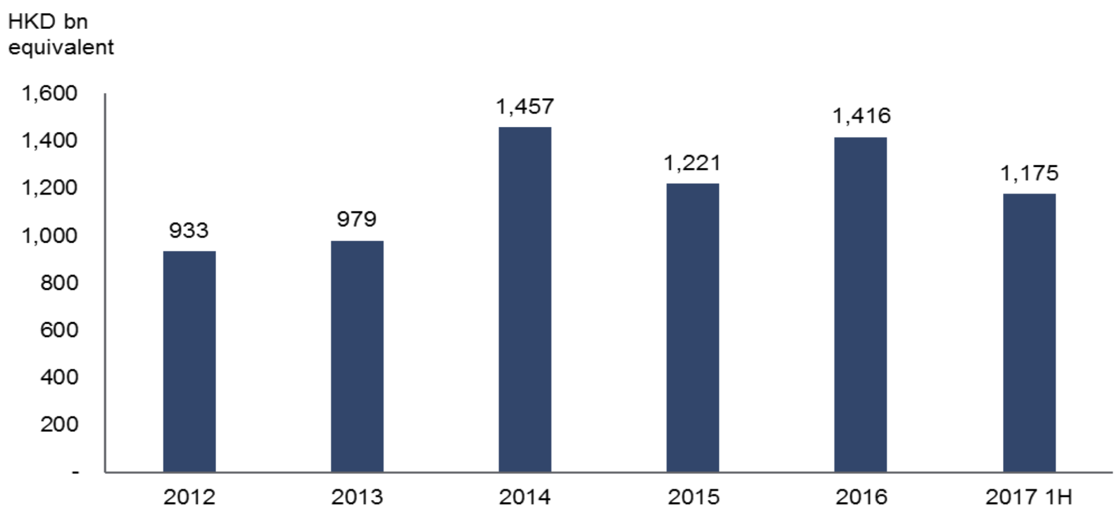
4.3 Institutional bonds

4.3.1
Market Access

The institutional bond market represents one of the main sources of debt financing for public sector, corporate and financial institutions globally. This market is typically segmented by currency and country.

The USD market represents the largest bond market, offering substantial liquidity from both US as well as international investors. USD bond issuance in Asia ex-Japan was HKD1,416bn equivalent in 2016 and is on track to reach a historical high with issuance in 1H 2017 totaling HKD1,175bn equivalent. Issuers continue to take advantage of low interest rates and strong market conditions. Investor demand remains strong with corporate investment grade credit spreads further reducing in 1H 2017.

Chart 8 – USD bond issuance volumes in Asia ex-Japan 2012 to 1H 2017



Source: Bloomberg

The table below shows some selected recent USD investment grade bond issuance in Hong Kong.

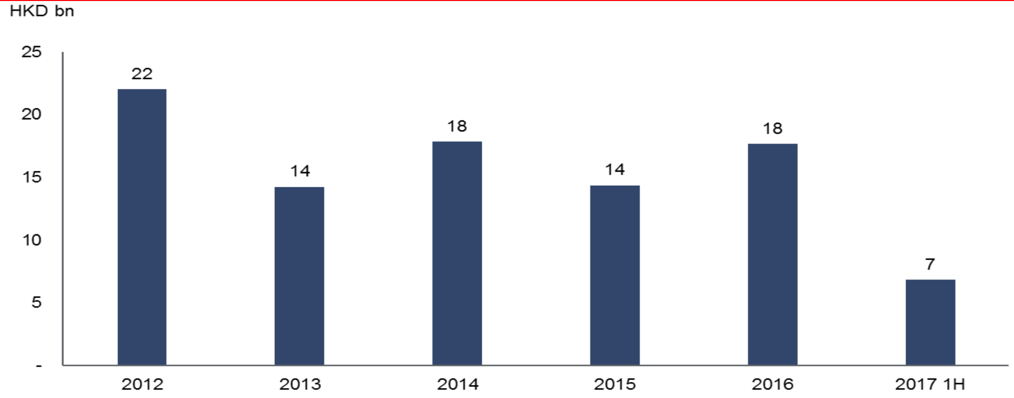
Chart 9 – Selected and recent USD investment grade bond issuance

Date	Borrower	Size (USDm)	Tenor (years)	Sector
Jul-17	Castle Peak Power Company	500	10.0	Utilities
Jun-17	Swire Pacific	300	7.0	Conglomerate
Mar-17	CK Hutchison Holdings	1,800	5.0 & 10.0	Conglomerate
Feb-17	HKSAR Government (Sukuk)	1,000	10.0	Government
Oct-16	MTR	600	10.0	Transportation
Sep-16	CK Hutchison Holdings	1,250	5.0 & 10.0	Conglomerate
Jul-16	Link REIT	500	10.0	REIT
Jul-16	HKT PCCW	750	10.0	Communication
Apr-16	Hongkong Electric	750	10.0	Utilities

Source: Bloomberg

There is also an established HKD bond market, albeit more limited in depth and typically private. Publicly available data shows HKD bond issuance totaling HKD18bn in 2016 and HKD7bn in 1H 2017. Other developed institutional bond markets also exist in, amongst others, EUR, SGD, CNH, CNY, AUD, JPY, GBP, CAD and CHF.

Chart 10 – HKD bond issuance volumes for Hong Kong issuers 2012 to 1H 2017



Source: Bloomberg

The strong credit rating of AAHK and 100% ownership by the HKG would mean that AAHK could access a number of institutional bond markets in different currencies. Of these, it is expected that the HKD and USD markets would be natural choices for AAHK and AAHK has issued USD and HKD bonds before (e.g. AAHK has a USD350m 10 years bond matured in 2013 and issued HKD bonds from time to time up to 2013). However, other currencies should also be evaluated on an ongoing basis to enable AAHK to take advantage of market opportunities when swapped rates compare favourably. AAHK currently has a multi-currency MTN programme in place for bond issuances in different currencies.

4.3.2 Terms and conditions

Chart 11 – HKD Bond vs. USD Bond

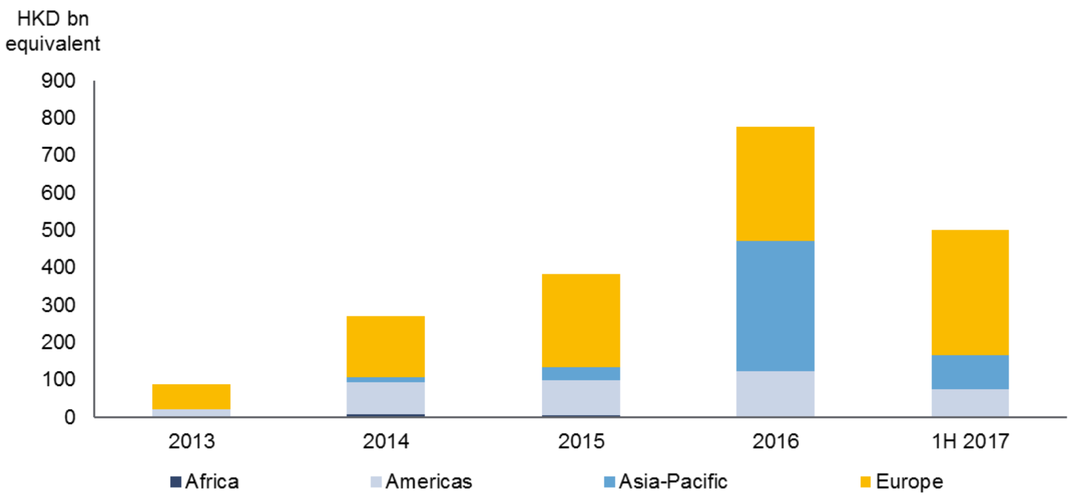
	HKD	USD
Typical Investors	Mostly local	Local and International
Issuance Size	Recommend up to HKD5bn in a single year	Recommend up to USD1.5bn in a single issuance
Interest Rate	Fixed rate	Fixed rate
Benchmark	Referenced to HKD swap rate	US Treasury
Typical Tenor	Up to 15 years	Up to 30 years
Optional Prepayment	Typically no. Can be included but subject to a prepayment fee which is typically high	Typically no. Can be included but subject to a prepayment fee which is typically high
Other Considerations	Dependent on a small number of key investors	Currency hedging may be required in order to mitigate any currency risk according to AAHK's financial policies

4.4 Green bonds

4.4.1 Market Access

There is substantial investor appetite for bonds issued in green format. As of April 2017, 1,714 money managers with USD68 trillion assets under management have signed up to the United Nations Principles for Responsible Investment. The green bond market has grown rapidly in recent years as shown in the graph below. Global issuance of green, social and sustainability bonds totaled HKD780bn equivalent in 2016 and HKD499bn equivalent in 1H 2017, with Asia Pacific contributing equivalent of HKD351bn in 2016 and HKD94bn in 1H 2017. Green bonds have been successfully issued by major Hong Kong corporates (MTR Corporation and Link REIT) as well as an international airport (New Mexico City International Airport).

Chart 12 – Issuance of green, social and sustainability bonds 2013 – 1H 2017



Source: Dealogic, Bloomberg and Climate Bond Initiative

4.4.2 Terms and conditions

A Green Bond has generally same terms and conditions as a conventional bond with the main exception that the proceeds of a Green Bond are used to fund an eligible green project or investment. Investment grade, high yield, project, asset backed securities, and covered bonds can all be issued in green format.

The Green Bond Principles were established by a group of investors, issuers and intermediaries with The International Capital Market Association ("ICMA") acting as the Secretariat. The Green Bond Principles are widely recognized and adopted and set out 4 key pillars for a Bond to be considered a Green Bond, namely:

1. Proceeds of the bond to be applied to eligible green projects (example sectors set out below);
2. Issuer to establish a clear process to evaluate and select eligible green projects;
3. Issuer to clearly track or earmark proceeds to eligible green projects;
4. Issuer to provide regular (at least annual) reports to investors summarising how the proceeds have been applied.

Furthermore the Green Bond Principles strongly recommends issuers obtain an external review via one of the following ways:

I. Consultant Review / Verification: e.g. obtaining a second party expert opinion;
II. Certifications: validating against independent standards e.g. Climate Bond Standards;
III. Green Bond Rating

4.4.3 Use of Proceeds

The Green Bond Principles outlines several sectors of eligible green projects

Chart 13 – Eligible sectors for Green Bond issuance

Eligible Sectors	Further considerations and examples of potential projects / investments
Renewable energy	Generation of energy from renewable sources (such as wind, solar, tidal, bio, hydro, geothermal and related infrastructure) including production, transmission, appliances and products
Energy efficiency	Improvement of energy efficiency in various sectors (such as in new and refurbished buildings, energy storage, district heating, smart grids, appliances and products) Development of energy efficiency products and technologies that increase underlying asset, technology, product or system(s) performance (such as improved lighting technology)
Pollution prevention and control	Including waste water treatment, greenhouse gas control, soil remediation, recycling and waste to energy, value added products from waste and remanufacturing, and associated environmental monitoring analysis
Sustainable management of living natural resources	Including sustainable agriculture, fishery, aquaculture, forestry and climate smart farm inputs such as biological crop protection or drip-irrigation
Terrestrial and aquatic biodiversity conservation	Including the protection of coastal, marine and watershed environments
Clean transportation	Low energy or emission transportation assets, systems, infrastructure, components and services (such as electric, hybrid, public, rail, non-motorised, multi-modal transportation, infrastructure for clean energy vehicles and reduction of harmful emissions)
Sustainable water management	Including sustainable infrastructure for clean and/or drinking water, sustainable urban drainage systems and river training and other forms of flooding mitigation
Climate change adaptation	Flood defenses systems and related infrastructure, including information support systems, such as climate observation and early warning systems)
Eco-efficient products, production technologies and processes	Such as development and introduction of environmentally friendlier, eco labelled or certified products, resource efficient packaging and distribution
Green buildings	Meet regional, national or internationally recognized standards

Green bonds could be offered at competitive pricing in the market with terms that are at least equally as favourable as that of conventional institutional bonds. Issuing green bonds can also offer AAHK a way to showcase its green credentials and appeal to investors who are increasingly focused on environmental issues. The 3RS project includes several components that, subject to more detailed review, align with these sectors. For example, in terms of energy efficiency and green buildings, AAHK is expected to spend around HKD26bn in the Third Runway Concourse which is targeted to achieve BEAM Plus Gold[1] rating and can serve as eligible green project for the use of proceeds for green bond issuance.

[1] BEAM Plus is a comprehensive environmental assessment scheme for buildings recognized by the Hong Kong Green Building Council Limited.

4.4.4 Green bond implementation

In order to implement a green bond programme AAHK is recommended to set out its green investment plans to investors in a green bond framework or similar document as well as establish internal guidelines for the implementation of a green bond programme. AAHK is expected to secure an external review using one of the methods recommended under the Green Bond Principles.

4.5 Retail bonds

4.5.1 Market Access

Retail bonds may offer benefits in the form of increased public engagement as local investors can participate in the AAHK business and receive a financial return arising from investing in the project. Potential benefits would need to be considered alongside the financial costs associated with a retail bond issuance as, based on current estimates of pricing, such an offering is likely to be more expensive than other sources of financing available to AAHK such as institutional bonds and bank loans.

Should AAHK issue a retail bond, HSBC believes that it would attract strong demand from the local retail investor base. HKG related entities like AAHK, MTR Corporation Limited and the Hong Kong Mortgage Corporation Limited ("HKMC") have issued retail bonds before 2008. Since 2011, the HKG has issued retail bonds to the public every year which have been highly oversubscribed each time. HSBC believes that a retail bond offering from AAHK, a wholly owned subsidiary of the HKG, would also be well received by the market.

Chart 14 – Retail bond issuance by HKG

Issuance Date	Size (HKDbn)	Tenor (years)	Coupon	Floor	Subscription Level	Avg. Coupon Paid to date	Comments
Jun-17	3.0	3	CPI (flat)	2.0%	1.39x	n/a	Silver Bond
Aug-16	3.0	3	CPI (flat)	2.0%	2.97x	2.15%	Silver Bond
Jun-16	10.0	3	CPI (flat)	1.0%	2.25x	1.80%	
Aug-15	10.0	3	CPI (flat)	1.0%	3.57x	2.40%	
Aug-14	10.0	3	CPI (flat)	1.0%	2.88x	3.12%	
Jun-13	10.0	3	CPI (flat)	1.0%	3.96x	3.81%	Matured
Jun-12	10.0	3	CPI (flat)	1.0%	4.98x	4.15%	Matured
Jul-11	10.0	3	CPI (flat)	1.0%	1.32x	4.52%	Matured

Source: HKG website as of 4 July 2017

However, compared with other financing sources, the depth of the HKD retail bond market is more limited and the tenors achievable are shorter. As can be seen from the table above, the HKG's retail bond issuances have been limited to 3 years in tenor and a size of HKD10bn (with the exception of the "Silver Bonds" which are in HKD3bn). AAHK has not issued retail bonds for a long time and its last issuance in 2003 totalled HKD1.2bn. HSBC recommends AAHK to target an offering of HKD3-5bn as part of the funding plan. HSBC also recommends AAHK to take into account HKG's retail bond offering program to ensure that both timing and terms are appropriate and optimised.

The table below summarises the expected terms and conditions of AAHK's retail bond issuance.

4.5.2 Terms and conditions

Chart 15 – Expected terms and conditions of AAHK's retail bond issuance

Typical Investors	HK public
Recommended Issuance Size	HKD3-5bn
Interest Rate	Fixed rate
Benchmark	Fixed rate
Typical Tenor	3 years
Prepayment	No optional prepayment
Other Considerations	Higher issuance costs associated with retail marketing

4.6 Export credits

4.6.1 Market Access

AAHK can consider the potential benefits of securing export credit agency ("ECA") supported financing for appropriate parts of the 3RS project. Since ECA-supported financing would need to be tied to the country of origin of key equipment and services of the 3RS project, its application would be limited to only certain parts of the 3RS project that involve imports of large equipment and services from countries with Export Credit Agencies that facilitate competitive loan financing costs. AAHK will work with contractors, Export Credit Agencies and commercial banks to obtain ECA backed funding proposals to compare against the terms of other sources of financing.

Although ECA-supported financing has historically not been frequently used in Hong Kong, companies in the transport and energy sectors have successfully raised export credit agency backed funding in Hong Kong to obtain the benefits of longer tenor and flexible drawdown schedule. For example, a power company has successfully secured an ECA-supported 15 years loan in March 2017 for its power plant expansion in Hong Kong.

4.6.2 Terms and conditions

ECA-supported financing can provide long dated financing (e.g. 8 years construction period plus 5 years of repayment period) with competitive all-in cost at times compared to commercial bank loans and bonds. ECAs will charge an upfront premium for providing cover to lending banks who then lend at reduced margins to reflect the benefit of a comprehensive sovereign cover. Some ECAs also have direct lending programs, which can increase the competitiveness of the funding to the project and provide additional sources of liquidity. The relative cost of ECA funding will be considered in comparison to alternative sources of finance including commercial bank loans and bonds. ECA funding provides a flexible drawdown schedule, but the premium is paid upfront and typically is not fully reimbursed in the event of pre-payment.

Chart 16 – Expected terms and conditions of ECA funding

Loan Amount	Up to 85% of export contract value + proportions of 3rd country and local costs (max. 30%) + up to 100% of ECA premium
Lenders	Commercial banks; certain ECAs act as direct lenders
Cover	Typically 95-100% comprehensive risk cover in form of a guarantee or an insurance to the commercial banks
Drawdown and Repayment	Drawdown (construction) period in line with the commercial contract + usually up to 10-year repayment period
Currency	USD, HKD, EUR, JPY or other freely convertible currencies
Interest Rate	Floating rate or fixed rate (Commercial Interest Reference Rate ("CIRR") available with specific ECAs subject to their approval)
Premium	Typically payable upfront

4.7 Hybrid

4.7.1 Market Access

Hybrid capital, including subordinated bonds or preference shares, would provide AAHK with a form of equity like financing without diluting the shareholding of AAHK. This form of financing has been utilised by Hong Kong infrastructure companies in recent years to obtain better rating treatment as scheduled payments of hybrid capital can be deferred without defaulting on the underlying obligations under periods of financial stress. However, hybrid capital is more expensive compared to senior debt.

Given (i) the reasonable leverage being budgeted, (ii) the capacity of AAHK to raise additional senior debt on reasonable terms and (iii) the objective to minimise financing costs, HSBC has not recommended including hybrid capital in the detailed funding plan.

4.8 Sukuk

4.8.1 Market Access

HKG issued its first Islamic bond in 2014. This bond was issued to increase the profile of Hong Kong as a centre for Islamic finance and as a template for other issuers to utilise Hong Kong to issue their Islamic bonds. As islamic bonds are more complex than conventional financing (as they need to be structured to comply with Sharia which prohibits the payment of interest) and in the short term are unlikely to offer a pricing advantage to AAHK compared to other financing options available, HSBC has not recommended including Sukuk in the detailed funding plan.

5. Financial Risk Management Analysis

5.1 Financial risks

When designing the funding plan, the following financial risks should be considered:

- Risk that the financing to complete the project is not available or is only available at significantly higher cost than expected
- Risk in the event that the benchmark rate to which the overall cost of financing is linked and credit spread increase during the financing period
- Interest rate exposure arising from floating rate debt instruments. An increase in the relevant floating rate benchmarks will increase the interest cost for floating rate debt instruments
- Foreign currency exposure arising from any debt not denominated in HKD. Such foreign currency debt will give risk to foreign currency debt service obligations which will need to be met from AAHK's revenues which are predominately denominated in HKD. Changes in the foreign currency exchange rate will impact the effective cost of the debt in HKD terms

These risks and possible mitigation approaches are evaluated below.

5.2 Financial risks mitigation

5.2.1 Securing financing commitments in advance

In order to obtain greater certainty with respect to the availability and cost of debt, AAHK may consider to secure funding or funding commitments for such debt in advance of the date on which funding is expected to be required.

Banks can provide committed facilities which can be drawn over a specified period of time (known as the availability period). As the facility is committed, AAHK would get the benefit of certainty of both funding as well as cost. The undrawn portion of the facility would incur a commitment fee which is usually a proportion of the margin applicable to the drawn portion. Hence the cost payable by AAHK for this certainty is lower than if the debt was drawn.

However, availability periods are typically limited to 5 years or less and are typically only provided in the loan market. Given AAHK's strong credit, its ability to access the market based on ongoing cashflows, the size of the 3RS required financing and the length of the construction period, it would not be necessary or economical to secure commitment for the whole debt amount, as long as AAHK has maintained sufficient liquidity to handle any unforeseen circumstances, e.g. changes in timing of 3RS capital expenditure, variations in actual cashflows of AAHK versus plan and/or disruptions to the debt markets.

5.2.2 Raising financing earlier than required

Raising financing earlier than required can offer the following benefits:

- Taking advantage of favourable market conditions to secure attractive financing terms, including cost, which are available now
- Removing the risk associated with needing to raise debt later
- Having cash on hand to fund any unforeseen funding requirements

These benefits would need to be balanced against any negative cost of carry which would be incurred. This cost of carry would equate to the interest that would need to be paid on the additional debt, minus any interest income that could be earned on the corresponding excess cash held.

The following analysis should be done by AAHK regularly throughout the funding period to systematically assess whether there would potentially be any economic benefit for the AAHK to issue fixed rate debt earlier than required to lock in current long term debt interest rate.

In the analysis, AAHK should consider:

- Benchmark interest rate projections. AAHK can conduct analysis using the latest market projections for long term interest rates. Whilst a range of underlying benchmarks would be applicable, HSBC would recommend focusing on the 10yr US Treasury ("UST") rate because:
  - The 10yr UST is a liquid benchmark which is easily observable and for which economists provide forecasts
  - HKD rates are closely correlated with the USD rates
  - As detailed in sections 4 and 6, HSBC would expect long term bond issuance, particularly in USD, to form a significant component of the AAHK's early debt issuance

  As a first step, the latest market projections of 10yr UST yields should be obtained. The table below illustrates different analysts' forecasts of treasury yields at the current time.

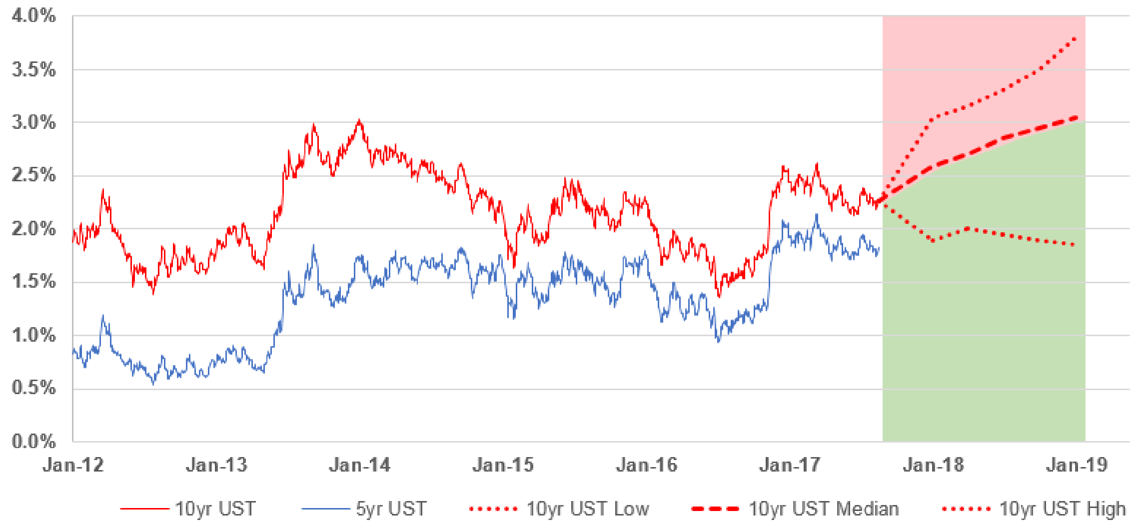
Chart 17 – Market estimates of 10yr UST yields

	Q4 2017	Q1 2018	Q2 2018	Q3 2018	Q4 2018
High	3.05%	3.15%	3.30%	3.50%	3.80%
Median	2.59%	2.70%	2.85%	2.95%	3.04%
Low	1.90%	2.00%	1.95%	1.90%	1.85%

Source: Bloomberg as of 22 August 2017

- AAHK's implied breakeven UST yield. After getting the 10yr UST market estimates and making assumptions on credit spread and deposit rate, AAHK can compute its implied breakeven UST yield for raising financing earlier than required and compare the breakeven yield with the market estimates. The implied breakeven UST yield is the rate that UST yield has to rise in the future so as to offset the net incremental interest cost of raising debt earlier than required. The net incremental cost would take into account the incremental debt cost (after deducting interest income that can be earned on the surplus cash) over the period when debt is raised earlier than required. A chart can be plot to compare the interest rate projections and the AAHK's implied breakeven UST yield.
  - If AAHK's implied breakeven UST yield is much higher than the market median estimate, then there is limited expected economic benefit of raising financing earlier than required if future yield follows market estimate (red area in the graph below).
  - If AAHK's implied breakeven UST yield is much lower than the market median estimate, then there is economic benefit of raising financing earlier than required if future yield follows market estimate (green area in the graph below).
  - If AAHK's implied breakeven UST yield is around the market median estimate, then AAHK has no strong rationale to raise financing earlier than required as future yield is estimated to be more or less similar to the yield that AAHK can lock in currently plus the net cost of raising financing earlier.

Chart 18 – Market estimates of 10yr UST yields vs AAHK's implied breakeven UST yield



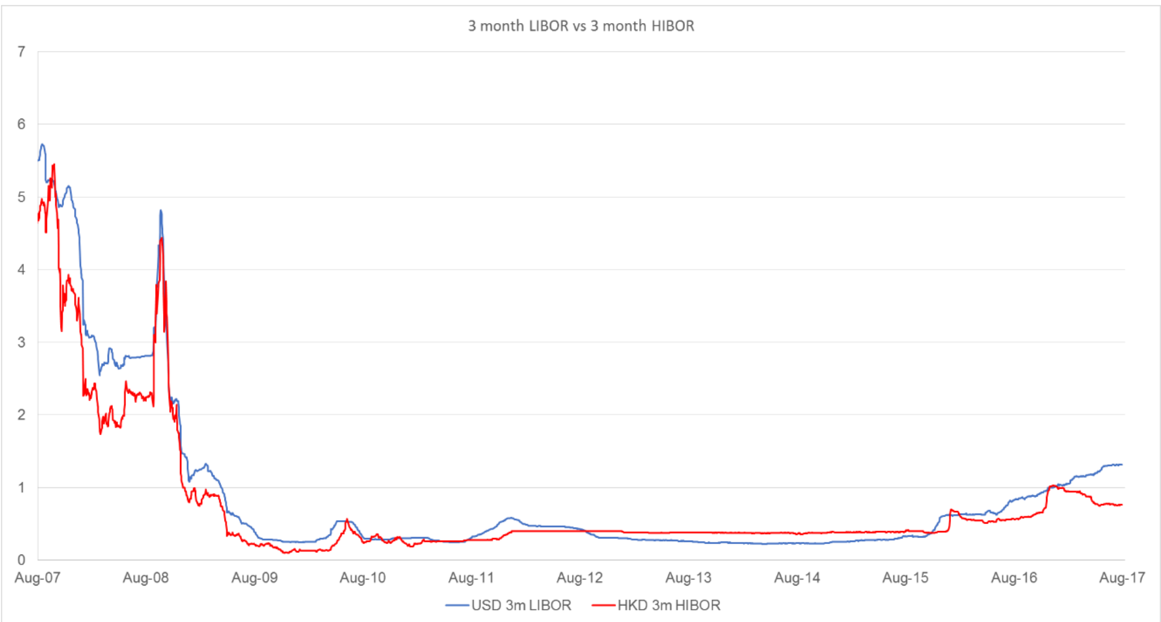
Source: Bloomberg as of 22 August 2017

In current market, as there is wide discrepancy in market high and low estimates for UST yield and AAHK's implied breakeven UST yield is close to market median estimate, AAHK has no obvious expected benefit today to raise financing substantially in advance of when it is forecasted to be required. It should be noted that market projections carry significant uncertainty and there is often a large variation in market opinions.

As the construction of 3RS progresses, AAHK should raise financing in a manner that allows reasonable time buffer in advance of disbursement of payments to suppliers to maintain financial prudence.

The analysis above focused on UST yield. The graphs below show that due to the USD-HKD peg, HKD rates are historically closely correlated with the USD rates.

Chart 19 – USD 3-month LIBOR and HKD 3-month HIBOR movement over last 10 years



Source: Bloomberg as of 22 August 2017

Chart 20 – USD 10-year swap and HKD 10-year swap movement over last 10 years

Source: Bloomberg as of 22 August 2017

5.2.3 Purchasing pre-financing hedging products

Derivative instruments are available to “lock in” benchmark rates in advance of an actual debt raising to mitigate market risks. However, such products do not mitigate the risk of availability of funding. For USD bond issuance, typically the yield is benchmarked against the US Treasury bond yield of comparable tenor, plus a credit spread. While the change in credit spread may not be hedged easily, the benchmark US treasury yield could be hedged by US Treasury-Lock (“T-Lock”) which is a commonly used hedging instrument in the capital markets. In anticipation of a USD bond issuance, the issuer could enter into a T-lock contract with a bank to “lock in” a US treasury yield for a future date. The maturity of the T-Lock usually could range from a few days to a few months, depending on the certainty of the bond issuance, market volatility and interest rate view of the issuer. For HKD bond issuance, there is no hedging tool identical to T-Lock. Instead other HKD interest rate products, e.g. interest rate swap or interest rate cap, could be considered but it needs to be emphasized there would be mismatch and basis risks involved.

5.2.4 Managing interest rate risk

AAHK has an existing risk management policy which stipulates that the group adopts a policy of ensuring that between 40% and 60% of its borrowings are effectively on a fixed rate basis in general, either through the contractual terms of the interest-bearing financial assets and liabilities or through the use of interest rate swaps. In view of the substantial amount of debt to be raised for the project, the long tenor involved for some of the borrowings and AAHK’s revenues have no obvious link to interest rate, HSBC recommends AAHK to consider maintaining a higher proportion of borrowings effectively on a fixed rate basis, with inclusion of an absolute allowance for unhedged debt. This can be achieved either by raising more debt with a fixed interest rate or by entering into interest rate swaps or interest rate caps with notional amounts aligned to the principal amounts of the debt that is being hedged. This can provide higher cash flow certainty and lower the risk of a funding shortfall due to interest rate movements.

5.2.5 Managing foreign exchange risk

Given that AAHK's revenues are expected to be substantially denominated in HKD, and the financing plan contemplates raising a component of debt in USD, AAHK may be exposed to foreign currency risk. This risk is substantially mitigated by the peg between USD and HKD, though AAHK in line with its policies, further manage the volatility of FX rates fluctuations through currency derivatives such as forwards, cross currency swaps and FX options. HSBC considers this to be a prudent approach.

5.2.6 Hedging strategy considerations

When considering or reviewing the financial risks management policies, key factors would include risk tolerance, market volatility, cost and effectiveness of different hedging instruments and their liquidity, maximum tenor for hedging, and accounting and tax implications. The risk management policies and their implementation should be formulated and monitored by AAHK's senior management, together with input from external and professional parties, and be reviewed on periodic basis in response to changing external environment.

AAHK has ISDA documentation in place to be able to access the bank market to purchase appropriate hedging instruments as required.

5.2.7 Hedging execution considerations

For the execution of any hedging strategy for substantial amount, and especially for longer tenor, a well thought-through and flexible plan should be discussed and formulated in advance. Liquidity could at times be very stretched against the backdrop of dwindling risk taking appetite in the international financial markets which could be event driven and highly volatile.

In the HKD market, for both interest rate and exchange rate, the dynamic of supply and demand locally is not always easy to predict. International events could also impact the sentiment and activities in the local market. Additionally speculative activities are exerting increasing influence in the liquidity and direction of the HKD market.

Any execution plan should aim to minimise the adverse impact of the hedging activities on the market prices and achieve the desired outcome efficiently at the lowest achievable cost possible. To this end, it is not uncommon to place execution orders with bank(s) and allow for a longer execution period. It is crucial to keep monitoring the development of the markets and reformulating the hedging strategy as and when needed.

6. Funding Plan Recommendations

6.1 General approach

The funding plan should be dynamic in nature, reviewed regularly and adjusted as necessary to best meet the AAHK's objectives and requirements having regard to the market conditions at the time, considering for example, factors such as:

- The projected quantum and timing of debt financing required, taking into account business cashflows and progress of the 3RS project
- The debt financing environment, including current and projected interest rates as well as liquidity across the range of debt sources
- An evaluation of potential financing risks and the optimal approach towards managing these risks

Financial risk analysis should be regularly updated including regular market reviews and analysis of risk mitigation approaches.

In the recommended funding plan, ranges are used to indicate potential issuance sizes for each debt instrument in the medium term to provide flexibility for AAHK to optimise the choice of instruments closer to the time of issuance as market conditions and relative terms of different instruments would vary from time to time. The total aggregate debt issuance across all instruments in the recommended funding plan is not expected to exceed the debt requirement to fund 3RS. The funding plan is centred around the HKD69bn projected debt requirement and the ranges provide buffer for any deviations due to changes in timing of 3RS capital expenditure, variations in actual cashflows of AAHK versus plan and/or disruptions to the debt markets.

The funding plan is designed taking into account the characteristics of the 3RS project and different debt instruments described in Section 4. In particular:

- USD bonds (including green bonds) and HKD loans represent the largest financing sources in the funding plan due to the depth of both markets compared to other debt sources. Their prices are similar and the proposed ranges allow AAHK to adjust the mix according to the relative pricing at the time of issuance
- The amount of retail bond has been limited by the higher cost compared to other sources of debt
- The size range budgeted for HKD bond market reflects the smaller market capacity of this instrument compared to USD bonds and HKD loans. HKD bonds are issued through private placements and therefore AAHK is recommended to consider when terms offered by private investors are attractive compared to USD bonds and HKD loans
- To avoid the need of refinancing during 3RS construction period, longer dated USD bonds are placed earlier in the funding plan. This is followed by shorter tenors in the medium term to create an amortising repayment profile that best matches the cash flows post 3RS completion. As most of HKD loans market appetite lies for tenor within 5 years, HKD loans are placed in the plan only starting from FY2020/21 to minimise refinancing risks

6.2 Timing of market approach

Credit market conditions are supportive today and the AAHK has strong access to the debt markets. Despite market expectations that interest rates will rise in the short term, current forecasts and HSBC's analysis of the potential negative carry costs show that there is no strong economic rationale for raising debt substantially earlier than the time when it is projected to be required. Therefore, AAHK should approach the market closer to the time when financing is required, whilst keeping a reasonable buffer in advance of payment disbursements to suppliers.

6.3 Funding plan recommendations

Based on prevailing assumptions as well as an assessment of the current market conditions, HSBC would recommend the following funding plan:

6.3.1
Preparatory work

Preparatory work (through to end 1H FY2018/19)

- Collate information package to enable funding banks to confirm compliance with Equator Principles
- Refresh financial model as required
- Provide updates to Rating Agency(ies)
- Update and upsize MTN programme from USD1bn to USD8bn
- Prepare investor marketing materials
- Develop Green Bond Framework and procure external review

6.3.2
Near term funding transactions

Near term funding transactions (estimated 2H FY2018/19 – FY2019/20)

Prior to any debt raising exercise, AAHK should obtain debt market updates, including indicative pricing and demand, from reputable financial institutions in order to determine the optimal funding transactions given the market conditions at the time.
Based on current market conditions, HSBC believes that near term funding transactions could include:

1. Issue longer dated USD bonds to institutional investors

Given the size of the debt requirement for 3RS, the bonds are likely to represent a significant component of the funding plan. In particular, given the depth of the USD bond market, the long tenors available and the natural currency hedge through the HKD's peg to USD, HSBC believes that USD bonds should be considered.

HSBC recommends AAHK issue longer dated USD bonds (10 years) in the earlier years of the funding plan to both (a) reduce any need to refinance prior to the completion of the 3RS, and (b) establish a long dated USD benchmark to facilitate price transparency for future issuance. In the near term, a benchmark transaction of USD500m could be considered. AAHK has a MTN programme in place which can be utilised for issuing bonds efficiently.

Given that AAHK last issued USD bond in 2003 which matured in 2013, HSBC recommends AAHK to consider some preliminary investor engagement, for example, undertaking periodic non-deal roadshows, to ensure potential bond investors are kept up to date on AAHK's plans, including the launch of a green bond program if applicable. Through such dialogue, management can also obtain more comprehensive understanding on investors' key focus and concerns so that these can be taken into account when designing the key bond features.

2. Tap the HKD bond market when pricing is attractive

HKD bonds are also likely to be an attractive form of financing with the potential to offer long dated, fixed rate HKD denominated funding. AAHK has issued HKD bonds multiple times in the past and currently has HKD bonds outstanding. As a result, HKD bond investors are both familiar and comfortable with the credit. Whilst overall capacity of this market is more limited and issuance sizes are smaller than what can be achieved in, say the USD bond market, HSBC recommends engaging potential investors and issuing HKD bonds if the pricing is attractive. An aggregate of HKD7-10bn of HKD institutional bonds are expected to be issued over the 3RS construction period. AAHK's MTN programme can facilitate HKD bond issuance through private placements and multiple issuances would be possible in a single year.

3. Issue a HKD retail bond to the public

A retail bond offering towards the start of the AAHK's funding timetable will facilitate public engagement in the project from an early stage. As there has not been any non-HKG retail bond issuance in recent years, HSBC would recommend targeting a more conservatively sized offering, such as HKD5bn and 3 years tenor. HSBC also recommends AAHK to take into account HKG's retail bond offering program to ensure that both timing and terms are appropriate and optimised.

4. Maintain committed revolving bank facility(ies) with sufficient undrawn headroom

HSBC recommends maintaining committed revolving bank facility(ies) with sufficient undrawn headroom to meet any potential unexpected liquidity requirements. These may arise, for example, due to changes in the timing of the capex programme, variations in actual cash flows of AAHK versus plan and/or disruptions to the debt markets.

HSBC notes that AAHK currently has an HKD5bn revolving bank facility which is largely undrawn. HSBC believes that this, combined with the current cash balances held, provides sufficient liquidity in the near term. This should be refinanced prior to maturity in FY2020/21 and AAHK can consider to increase it up to HKD10bn as funding requirements increase. As the revolving bank facilities serve to provide liquidity only and are drawn only on a temporary basis, they do not form part of the core debt funding requirement for 3RS.

6.3.3 Medium term funding transactions

Medium term funding transactions (FY2020/21 through to completion)

The medium term funding plan provides size ranges guidance for different debt instruments as exact issuance sizes and timing of each instrument will be highly dependent on the market conditions as well as debt requirements at the time.

Based on current market conditions and information available to date, as well as considering the key funding objectives highlighted in Section 3, HSBC believes that the medium term funding strategy could include the following:

5. Raise HKD loan financing from the bank market

HSBC expects there to be strong appetite from both local and international banks for AAHK credit as a result of AAHK's high credit quality as well as the substantial market liquidity in the HKD loan market.

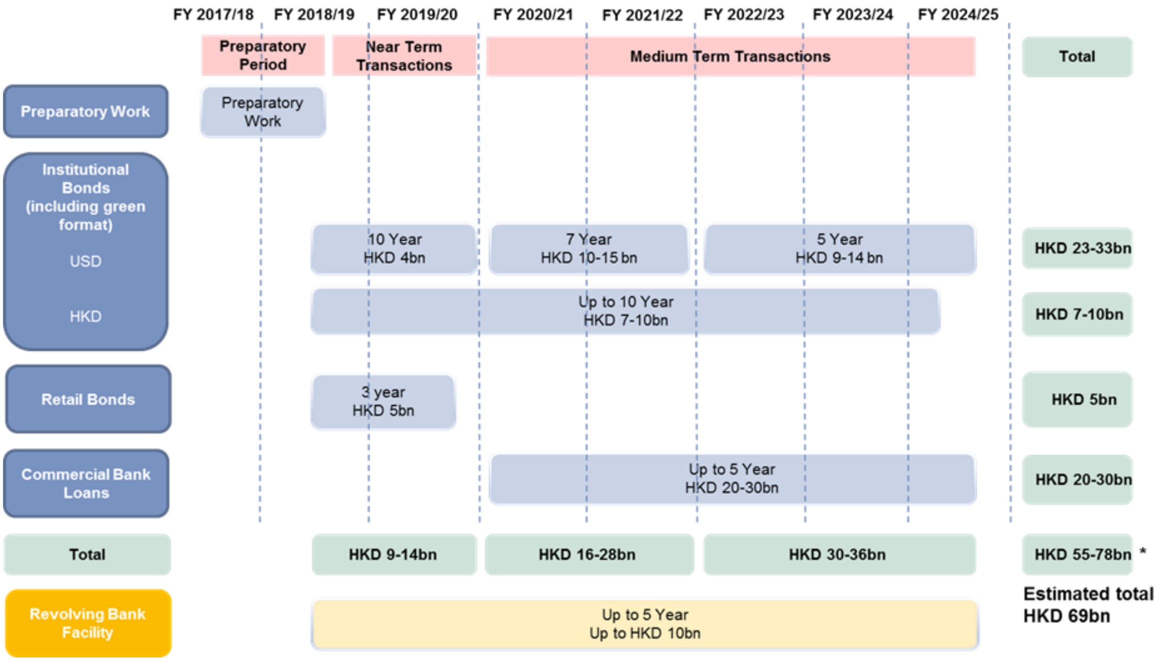
HSBC recommends AAHK to raise loan financing to capitalise on the competitive terms that AAHK would expect from banks, as well as benefit from the flexibility that bank financing offers e.g. in relation to drawdowns and repayments. As most of the bank loan market liquidity is focused on tenor of 5 years and shorter, HSBC recommends AAHK to raise loans in later years in order to minimise refinancing risk before 3RS completion. Target sizes of up to HKD10bn or potentially larger per transaction, depending on market liquidity at the time, could be considered, AAHK is expected to raise HKD20-30bn bank loans in aggregate over the medium term. AAHK can tap the loan market on a regular basis, though the total amount outstanding will be capped overall based on bank credit limits.

6. Issue shorter dated USD bonds

Shorter dated USD bonds can be considered in later years based on updated cash flows projections at that time. Shorter dated bonds are more appropriate as the project approaches completion with amounts and maturity dates scheduled to closely match expected net cashflows available to meet debt maturities. Tenors of 5-7 years could be considered in the medium term, with individual issuance sizes of up to HKD10bn achievable. Total issuance is expected to be up to HKD29bn over the medium term. Some of the bonds could be considered to be in green format, up to the amount equal to eligible green investments of AAHK, in order to broaden the investor appeal and showcase AAHK's green credentials.

The overall plan is summarised in the following schematic.

Chart 21 – Funding plan for AAHK



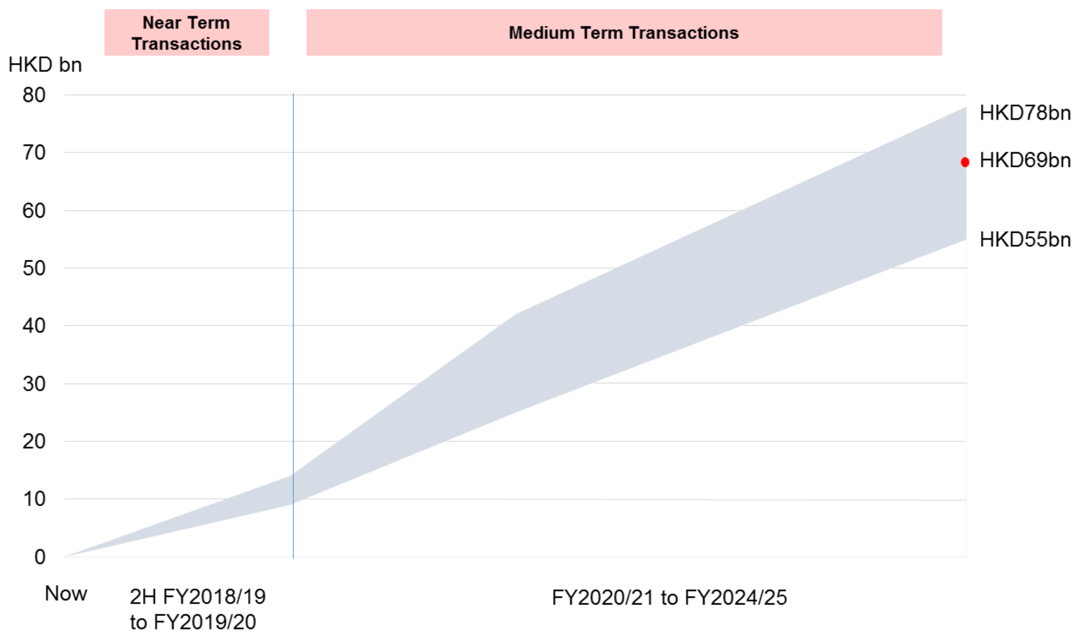
Note:

(1) Revolving bank facilities serve to provide liquidity only and do not form part of the core debt funding required for 3RS.

(2) HKD 55-78bn represents the summation of the lowest and highest range of each debt instrument type.

The graph below shows the range of cumulative incremental debt balance if incremental debt for 3RS is raised according to the schematic above.

Chart 22 – Cumulative additional debt balance range for AAHK



HSBC concludes that AAHK has strong access to debt markets, is confident that AAHK will be able to raise the required incremental debt of HKD69bn on reasonable terms and that the recommended detailed funding plan is robust and practicable.

Appendix 1 – Equator Principles Overview

1.1 Equator principles overview

The Equator Principles ("EP") is an internationally accepted risk management framework for determining, assessing and managing environmental and social risks in new projects.

EP is applicable to all industry sectors worldwide focusing on four financial products:

- Project Finance Advisory Services
- Project Finance
- Project-Related Corporate Loans
- Bridge Loans

Currently, there are 90 financial institutions in 37 countries that have officially adopted EP in their financial advisory and financing decisions and HSBC is one of them.

Chart 23 – List of Equator Principles Financial Institutions

ABN Amro	Eksport Kredit Fonden
Access Bank Plc	Ex-Im Bank
Ahli United Bank B.S.C.	Export Credit Norway
Arab African International Bank	Export Development Canada
ASN Bank N.V.	Fidelity Bank Plc
Australia and New Zealand Banking Group Limited (ANZ)	FirstRand Limited
Banco Bilbao Vizcaya Argentaria, S.A. (BBVA)	FMO (Netherlands Development Finance Company)
Banco Bradesco, S.A.	HSBC Holdings plc
Banco de Crédito	IDFC Bank
Banco de Galicia y Buenos Aires S.A.	Industrial Bank Co., Ltd
Banco de la República Oriental del Uruguay	ING Bank N.V.
Banco do Brasil	Instituto de Crédito Oficial (ICO)
Banco Mercantil del Norte S.A.	Intesa Sanpaolo SpA
Banco Popular Español	Itaú Unibanco S.A.
Banco Sabadell	JPMorgan Chase Bank, N.A.
Banco Santander S.A.	KBC Group N.V.
Banco Votorantim SA	KfW IPEX-Bank GmbH
Bancolombia S.A.	Korea Development Bank
Bank Muscat S.A.O.G.	Lloyds Banking Group Plc
Bank of America Corporation	Manulife
Bank of Jiangsu	Mauritius Commercial Bank Ltd.
Bank of Montreal	Mizuho Bank, Ltd.
Bank of Nova Scotia	National Australia Bank Limited
Bank of Tokyo-Mitsubishi UFJ, Limited	National Bank of Abu Dhabi PJSC
Bankinter	Natixis
Barclays plc	Nedbank Limited
BMCE Bank	NIBC Bank N.V.
BNP Paribas	Nordea Bank AB (publ)
CAIXA Econômica Federal	OP Financial Group
CaixaBank	Royal Bank of Canada
Canadian Imperial Bank of Commerce (CIBC)	Royal Bank of Scotland
Cathay United Bank Co., Ltd	Skandinaviska Enskilda Banken AB
CIBanco S.A.	Société Générale

CIFI (Corporacion Interamericana Para El Financiamiento de Infraestructura S.A.)	Standard Bank of South Africa Limited
Citigroup Inc.	Standard Chartered PLC
Commonwealth Bank of Australia	Sumitomo Mitsui Banking Corporation
Coöperatieve Rabobank U.A.	Sumitomo Mitsui Trust Bank, Limited
Credit Suisse Group	Svenska Handelsbanken AB (publ)
Crédit Agricole Corporate and Investment Bank	TD Bank Financial Group
DekaBank Deutsche Girozentrale	The Norinchukin Bank
DNB	UK Export Finance
DZ Bank AG	UK Green Investment Bank plc
E.SUN Commercial Bank, LTD	UniCredit SpA
Ecobank Transnational Incorporated	Wells Fargo Bank, N.A.
Efic	Westpac Banking Corporation

These committed financial institutions will only provide Project Finance or Project-Related Corporate Loans to clients who are in compliance with the EP, making the EP part of their project financing review process and standards.

1.2 10 Equator Principles

EP has the following 10 key principles for assigning a rating for the project, ensuring there is proper environmental and social management plan in place and continuous independent monitoring.

Chart 24 – 10 Equator Principles

1	**Review and Categorisation** To classify a project as Category A, B or C based on the level of environmental and social risks and impacts
2	**Environmental and Social Impact Assessment** To identify Environmental and Social risks, possible impacts, ways to minimise, mitigate and address risks / impacts
3	**Applicable Environmental and Social Standards** Most stringent of national regulations and IFC Performance Standards on Environmental and Social Sustainability and the World Bank Group Environmental, Health and Safety Guidelines
4	**Environmental and Social Management System and EP Action Plan** For Category A & B projects, develop an Environmental & Social Management System (“ESMS”). Environmental & Social Management Plan (“ESMP”) to address issues identified and EP Action Plan to address gaps
5	**Stakeholder Engagement** Ongoing process. Adapted to local specificities
6	**Grievance Mechanism** To receive and facilitate resolution of concerns and grievances about the project’s Environmental and Social performance
7	**Independent Review** Independent consultant to review ESMS, ESMP and stakeholder engagement mechanism
8	**Covenants**

	3 covenants in loan documentation to ensure continuous compliance with EP and periodic reporting requirements
9	**Independent Monitoring and Reporting** Independent Environmental & Social consultant for regular monitoring / reporting and share information with EP Financial Institutions
10	**Reporting and Transparency** For client: Publish Environmental and Social Impact Assessment summary & green house gas emissions For banks: Publish high level data on closed deals

Appendix 2 – Green Bond Principles Overview

2.1 Green Bond Principles overview

The Green Bond Principles are voluntary process guidelines that (1) provide issuers with guidance on the key components involved in launching a credible Green Bond, (2) aid investors by promoting availability of information necessary to evaluate the environmental impact of their Green Bond investments, and (3) assist underwriters by moving the market towards expected disclosures that will facilitate transactions.

The Green Bond Principles have the following four core components.

Chart 25 – 4 pillars of Green Bond Principles

1	**Use of proceeds**	• All designated Green Projects should provide clear environmental benefits, which will be assessed and, where feasible, quantified by the issuer • Determine Eligible Sectors / Project Categories, e.g. renewable energy, energy efficiency, green buildings, pollution prevention & control, terrestrial and aquatic biodiversity conservation, clean transportation, sustainable water management, etc. • Provide estimate of the share of new financing vs. re-financing, which investments may be refinanced and expected look-back period for refinanced projects
2	**Process for project evaluation and selection**	• Define environmental sustainability objectives • Determine evaluation & selection process for deciding how the projects fit within the eligible green projects categories identified (external review recommended to provide high level of transparency) • Define eligibility criteria (some define criteria upfront, others ensure a strong internal governance process to review each project)
3	**Management of proceeds**	• Net proceeds of the Green Bond should be credited to a sub-account, moved to a sub-portfolio or otherwise tracked by the issuer in an appropriate manner • The balance of tracked proceeds should be periodically adjusted to match allocations to eligible Green Projects made • Should disclose the intended types of temporary placement for the balance of unallocated proceeds • Recommend the use of an auditor or other third party to verify the internal tracking method and the allocation of funds
4	**Reporting**	• Issuers should provide up to date information on the use of proceeds to be renewed annually until full allocation, and for any material developments thereafter • Include a list of projects to which proceeds have been allocated, brief description of the projects, amounts allocated, their expected impact • Recommend the use of qualitative and, where feasible, quantitative performance indicators

2.2 External review

The Green Bond Principles recommended that issuers use an external review to confirm the alignment of their Green Bonds with the key features of the Green Bond Principles as defined above. There are a variety of ways for issuers to obtain outside input into the formulation of their Green Bond process and there are several levels and types of review that can be provided to the market. Such guidance and external reviews might include consultant review, verification or certification against internal or external standards, green bond ratings.

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