

# AHML-7 and -8 rouble bonds

## Assembling the spread puzzle

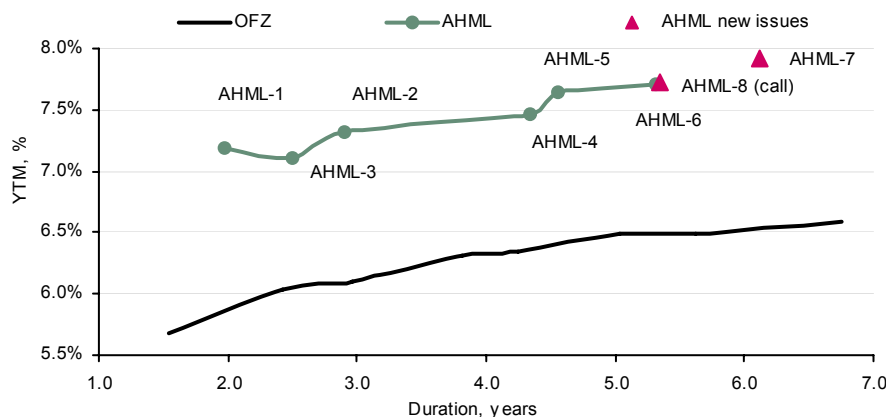
- **AHML-7 and -8 bonds** are expected to be placed in the first half of Oct 2006. Both issues benefit from state guarantees on the principal but not on interest payments.
- **Breaking up the spread.** In our opinion, the spread of partially guaranteed AHML bonds to OFZs consist of three components:
  1. The spread related to the difference between the taxation of OFZs and corporate bonds
  2. The spread due to the difference in credit risks between sovereign and government-guaranteed debt
  3. The AHML credit spread, reflecting its stand-alone credit quality
- **Results.** According to our model, the market assesses the “guarantee spread” as 31 bpts, the “taxation spread” as 70-100 bpts, and the AHML stand-alone credit spread as 127-160 bpts.
- **AHML fair credit spread should lie in the range of 120-140 bpts,** between VTB’s and RSHB’s (a bit closer to the latter) and around 150 bpts tighter than Russian Standard Bank’s.
- **Pricing.** Based on our assessment of the fair credit spread and our pricing model, the fair coupon rate is **7.67-7.73% for AHML-7** and **7.49-7.54% for AHML-8** (valued to call). The fair yields are **7.88-7.95%** and **7.70-7.75%** respectively.
- The rouble debt market environment at the time of the placement might differ significantly from the current situation, so the actual placement outcome could be substantially different from our estimates.

Figure 1: AHML main financial ratios

	2004	2005	1H06
Total assets	205.9	422.2	595.0
Equity	26.5	52.3	195.6
Equity ratio	12.9%	12.4%	32.9%
RoA	0.1%	0.8%	1.3%
RoE	0.8%	6.5%	5.3%
Net interest margin	3.7%	4.8%	2.9%
Cost/Income	89.2%	61.2%	44.8%

AHML, Renaissance Capital estimates

Figure 2: AHML-7 and -8 fair yield assessment



Sources: MICEX, Renaissance Capital estimates

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# Pricing

## AHML-7 and -8 bond terms

AHML plans to place AHML-7 and -8 bonds in the first half of Oct 2006. Both issues have state guarantees on the principal payments and have the following terms:

- **AHML-7:** The issue volume is RUB4bn. The principal amortization is scheduled for 15 Oct 2013 (50% of par) and 15 July 2015 (25% of par), with final maturity on 15 July 2016 (25% of par).
- **AHML-8:** The issue volume is RUB5bn. The principal amortization is scheduled for 15 June 2012 (40% of par); 15 Mar 2014 (30% of par); and 15 June 2017 (15% of par), with final maturity on 15 June 2018 (15% of par). AHML also has a call option at 60% of par on 15 Mar 2014.

We value AHML-8 to the call. The principal reason for the call is to protect the agency from pre-payment risk: When borrowers repay mortgage loans early, the agency does not receive planned interest income in full, but has to continue paying interest on the long-term bond. We expect the trend of declining interest rates for mortgage loans in Russia to continue to add risk, which means the pre-payment risk is high, just like the probability that AHML will exercise this call.

## The spread puzzle: Separating tax issues, state guarantees, and AHML risk

We compare AHML with OFZ, which to us seems natural for government-guaranteed bonds. In our opinion, the total spreads of AHML bonds to OFZ consist of the three following components:

- 1) The spread related to the difference between the taxation of OFZ and corporate issues (the “**taxation spread**”). The less favorable taxation of corporate bonds contributes to wider spreads for them even if they have the same credit quality as OFZs.
- 2) The spread due to the difference in credit risks between government-guaranteed and government debt (see Appendix 1), the “**guarantee spread**.”
- 3) The AHML **credit spread**, reflecting its stand-alone credit quality.

In order to calculate each of the components, we have developed a pricing model (see **Appendix 2** on page 14).

At the first step, we estimate the guarantee spread with the help of the first three issues of AHML bonds. They are fully state-guaranteed (all coupons and the principal), which means that their credit spreads equal zero. Thus, knowing the taxation spread, we can straightforwardly calculate the guarantee spread, which is 31 bpts on average.

At the second step, we use the AHML-5 and -6 bonds to estimate the market's assessment of the company's credit spread (these issues have only the principal guaranteed). We now have in hand the average guarantee spread and the taxation spreads; thus, extracting the credit spread is just a technical issue. According to our model, the market assessment of the agency's credit spread is 127-160 bpts.

Figure 3: AHML bond pricing

Issue	Maturity	Duration, years	Price	YtM	Taxation spread, bpts	Guarantee spread, bpts	Credit spread, bpts	Total spread, bpts	Coupon rate, %	State guarantee
AHML-1	1-Dec-08	1.97	107.90	7.18%	98	<b>38</b>	0	136	11.00%	full
AHML-2	1-Feb-10	2.90	111.20	7.33%	97	<b>29</b>	0	126	11.00%	full
AHML-3	15-Oct-10	2.50	106.33	7.10%	86	<b>24</b>	0	110	9.40%	full
AHML-5	15-Oct-12	4.56	99.63	7.64%	69	31	<b>160</b>	125	7.35%	principal
AHML-6	15-Jul-14	5.32	99.50	7.71%	70	31	<b>127</b>	124	7.40%	principal

Sources: MICEX, Renaissance Capital estimates

## Assembling the puzzle: Assessing the fair spread and yield levels for AHML-7 and -8

While we have the market's implied view on AHML's stand-alone credit spread, we would like to make our own judgement. AHML is a state-owned financial institution, and it is logical to compare it with the state-owned banks that have rouble bonds outstanding: VTB and Rosselkhozbank (RSHB). We believe that VTB benefits from a much stronger likelihood of state support, but the chances of AHML and RSHB receiving state support are approximately the same (see our 5 Sep 2006 report *Russian corporate bonds: Will the State protect your investment?*). On a stand-alone basis, VTB is also much stronger, due primarily to its sheet size. While AHML's and RSHB's size and capital adequacy are comparable, the agency is clearly more profitable, and we believe it has superior asset quality. (Mortgages are much less risky than loans to the agricultural sector, in our view.) For this reason, AHML's credit spread should be between VTB's and RSHB's (and a bit closer to the latter).

In terms of business models, we think AHML is better than specialised consumer finance banks, particularly Russian Standard Bank (RSB). Both institutions focus on one or several lending products, and refinance by issuing bonds in financial markets. The big difference is the product: Mortgage lending is less profitable, but far less risky than consumer finance. For this reason, we believe AHML credit spreads should be 100 bpts tighter than RSB's. However, RSB does not have any outstanding bonds of considerably long duration, and spreads in the short end of the yield curve are on average 50 bpts wider than in the long end.

Figure 4: AHML peer group analysis

	AHML		VTB	RSHB	BRS
	2005	1H06	2005	2005	1H06
<b>Credit spread to OFZ, bpts*</b>	<b>110-130</b>		<b>50</b>	<b>150</b>	<b>290</b>
Total assets	422	595	36,723	1982	5575
Equity	52	196	5,269	383	637
Equity ratio	12.4%	32.9%	14.3%	19.3%	11.4%
RoaA	0.8%	1.3%	1.9%	0.2%	5.0%
RoaE	6.5%	5.3%	12.8%	1.1%	44.9%
Net interest margin	4.8%	2.9%	3.4%	8.3%	17.5%
Cost/Income	61.2%	44.8%	52.5%	72.9%	22.4%

\*We do not adjust VTB, RSHB, or BRS for the tax component, since it is irrelevant for a large proportion of the holders of these bonds – foreign investors.

Source: Bank data, Renaissance Capital estimates

We think the fair AHML credit spread should lie in the range 120-140 bpts.

Now that we know all three spread components (the taxation spread, the guarantee spread, and the fair credit spread), we can calculate the fair coupon rate for AHML-7 and -8 issues (see **Appendix 2** on page 14 for details). In our assessment, the fair coupon rate should be in the ranges of 7.67-7.73% for AHML-7 and 7.49-7.54% for AHML-8 (valued to call). This corresponds to the fair YtM for AHML-7 bond in the range of 7.88-7.95%, and the fair YtC for the AHML-8 bond in the range of 7.70-7.75%.

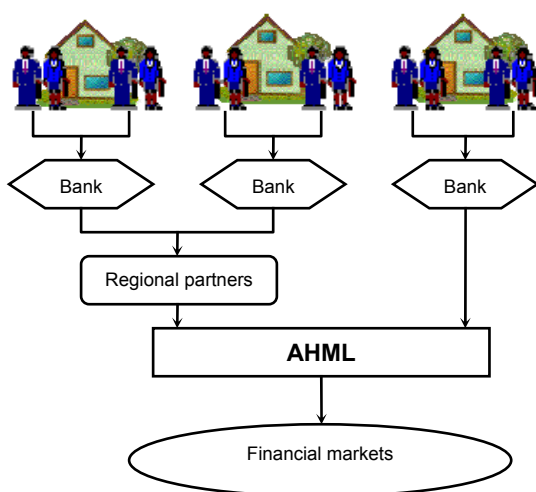
The rouble debt market environment at the time of placement might differ substantially from current conditions, so we make our estimate of fair spreads and yields as at the current date. The actual placement outcome could be considerably different from our calculations.

# AHML profile

## Business model

AHML was incorporated by federal government decree in 1997 in order to stimulate the development of mortgage lending in Russia. The Ministry of Federal Property is AHML's only shareholder. The necessity of establishing the AHML was dictated by international best practices as well as the Russian banking system's inability to refinance long-term mortgage loans. AHML's primary function is to provide funding to banks issuing mortgage loans. AHML is part of the mortgage lending system described in "The Concept of Developing a Mortgage Lending System in the Russian Federation," adopted by the government in 2000 (see Figure 5), which specifies AHML's operating procedures.

Figure 5: AHML's Role in the federal mortgage system

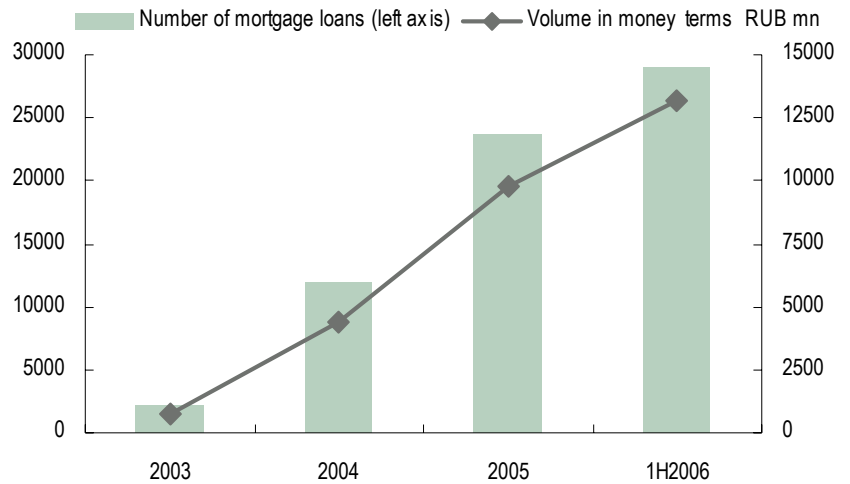


Sources: AHML, Renaissance Capital

The first level of the mortgage lending system includes commercial banks (primary lenders) that issue mortgages under terms set by the AHML. The second level is comprised of regional partners (regional operators and service agents), which are usually agencies affiliated with local governments. Regional operators buy out mortgages issued by commercial banks. Service agents are legal entities that service and collect mortgage payments. The third level is represented by AHML, which buys mortgages from its regional partners. The regional partners' agreements with AHML call for them to administer the loan (to the extent of collecting and transferring loan payments), ensure timely insurance renewal, and monitor collateral.

While the agency started operating only in 2002, its business has been growing and continues to expand at a rapid pace (see Figure 6). As of 1H06, AHML's portfolio was RUB13.2bn. The agency's network is comprised of 77 regional operators and 48 service agents in 86 of Russia's regions. AHML's partners are generating mortgages for it in 68 regions, the most active of which are Altai, Bashkortostan, Omsk Oblast, Udmurtia, and Samara Oblast.

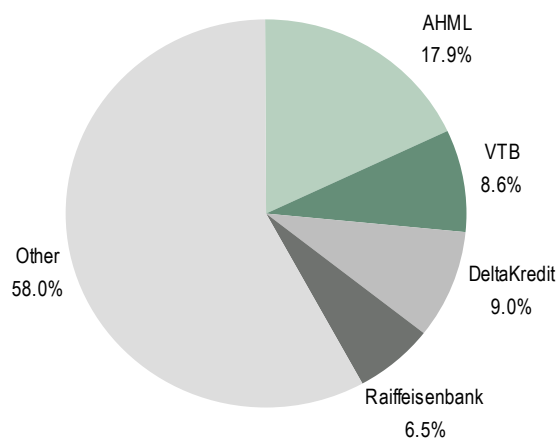
Figure 6: Mortgage loans purchased by AHML



Source: AHML

Mortgage lending is becoming popular in Russia; according to Central Bank statistics, nearly 400 Russian banks are issuing mortgage loans. The two most typical products are standard mortgage loans (where the pledge is registered in the real estate registry and the mortgage can be traded) and loans backed by real estate pledges (which cannot be easily assigned). The first category accounts for approximately 63% of all loans against real estate; however, Sberbank, the largest retail lender, prefers the second product. AHML estimates its market share in standard mortgage lending to be around 18% (see Figure 7), which is close to the target market share of 20% announced by the agency in 2004. For antimonopoly reasons AHML does not envisage its market share growing beyond 20%. AHML, however, is clearly dominant in rouble-denominated mortgage lending.

Figure 7: Market shares of major players in standard mortgage lending



Source: AHML

### Refinancing is the key challenge

With both real estate and the consumer lending market booming in Russia, a lack of demand for mortgages will certainly not be a factor limiting the growth of AHML's

business. The real bottleneck is its ability to attract adequate (in terms of both tenor and funding costs) refinancing for its growing mortgage portfolio.

When the agency was created, the intention was for AHML to raise long-term funds for refinancing mortgage loans via the issuance of mortgage-backed securities. In order to kick-start the business, and until legislation on mortgage-backed securities was adopted, AHML was supposed to raise long-term funds via state-guaranteed bond issues.

Despite the 2003 adoption of a law on mortgage-backed securities, and the amendments to it in 2006, mortgage-backed securities still do not work in Russia. Why?

- Current legislation does not allow prepayment and default risk to be passed on to MBS investors. The issuing SPV needs capital as a cushion against default.
- It is not possible to issue MBS tranches with different seniority, backed by the same pool of assets.
- Complicated structuring is needed to avoid tax implications for the issuing SPV.
- There is insufficient regulation for replacing mortgages in a pledged portfolio, or for the treatment of cash in an MBS structure.
- There are no escrow account regulations in Russian law.

For this reason, government-guaranteed bonds will remain the main source of refinancing for the time being. In 2005, AHML achieved an important success against the Russian Ministry of Finance, which was reluctant to increase the amounts of state guarantees needed to support AHML's business. The decisive factor was AHML's role in making housing more affordable, which is at the top of President Vladimir Putin's agenda. As a result, "A Concept for the Development of a Unified Mortgage Loan Refinancing System" (referred to below as "the Concept") was approved by the government in June 2005. It envisages RUB138bn of state guarantees in the period 2007-2010 (of which RUB16bn is allocated for 2007). RUB14bn of state guarantees for AHML in 2006 state budget have already been provided.

However, AHML is constantly looking for alternative sources of refinancing. For example, the agency sold a total of RUB3.64bn worth of mortgages in two tranches, one in 2005 and the other in 2006, to the Yamal Asset Management Company. Defaults of sold mortgages remain with AHML.

Furthermore, AHML is working on Russia's first on-shore RUB3bn MBS deal, and is about to file the documentation with the FSFM for review. We have not yet seen the structure, but we believe the agency has made great progress and is close to overcoming the abovementioned obstacles.

# Financial analysis

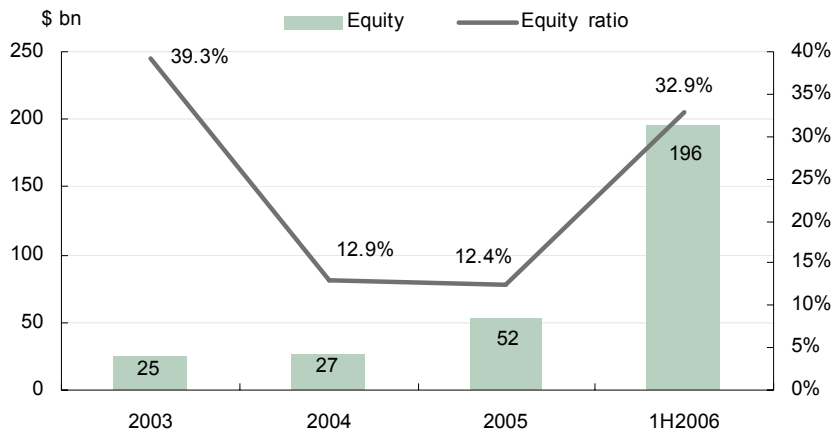
AHML principal activities are buying mortgages, issuing debt instruments in order to refinance its mortgage-buying activities, and short-term investment in liquid financial instruments. Based on these operations, the agency's balance sheet, and its P&L position, AHML resembles a non-bank credit organisation and, when analysing the agency, we treat it as a financial institution.

## Capital adequacy

AHML's mortgage portfolio has been growing at such a rapid pace that maintaining its capital adequacy at a sufficient level via earnings retention is too much of a challenge. For this reason, the state has so far made two equity contributions: RUB700mn in 2005, and RUB3.7bn in 1H06. In AHML's RAS accounts, however, these equity contributions were reflected only after the increases in share capital were officially registered. This happened in Feb 2006 for the first contribution, and in Aug 2006 for the second. The RUB700mn was booked as accounts payable in the 2005 accounts; the RUB3.7bn, in 1H06. Moreover, the Concept envisages share capital increasing in the amount of RUB18.5bn before 2010 (RUB4.5bn of this amount in 2007). In our analysis, we reclassify these amounts into equity, which is how they would be treated under IFRS.

The latest equity contribution gave a boost to the equity ratio (see Figure 8). However, as business growth drives the decline of this ratio, AHML plans to maintain a capital adequacy ratio in the range of 12-14% (the minimum level required by the Central Bank of Russia for banks issuing mortgage-backed bonds). Since the Concept has been approved at the government level, we believe there is a high possibility of further capital contributions and are confident that AHML remains adequately capitalised.

Figure 8: Capital adequacy



Source: AHML, Renaissance Capital estimates

## Asset quality

AHML's greatest credit exposure is in its mortgage loan portfolio. The main risk to this portfolio is a major economic downturn in Russia, in which decreasing personal income forces borrowers into default *en masse* and simultaneously declining property prices eat up the collateral coverage. Such a scenario does not seem very likely to us in the next two to three years.

A further risk AHML faces in the event of a default is the lack of legal precedent for evicting homeowners and transferring property rights. AHML's lending procedures place the responsibility for providing housing to evicted homeowners on the federal government. The 2004 changes to Russia's Civil Code made it easier to evict homeowners who defaulted on a mortgage, irrespective of whether they have another place to live. As far as we know, however, this has never been tested.

The characteristics of AHML's loan portfolio as of 1H06 are as follow:

- The average loan volume is RUB490,000. All mortgages are on residential property and are rouble denominated.
- The average loan term is 196.5 months (about 16 years).
- Interest rates range between 11% and 16%, with the weighted average being 14.18%.
- The average loan-to-value (LTV) ratio of the portfolio is 63%, which is very conservative. At present, AHML offers several products and allows the LTV for some of these to have a maximum coefficient value of 90%. From the agency's point of view, the risk associated with such a high LTV is covered by a higher interest rate (14.5%).
- The maximum payment-to-income (Pti) ratio is 50%; the portfolio average is 32.0%.
- The mortgaged property must be assessed by an AHML-authorized appraiser and insured by an authorized insurance company.

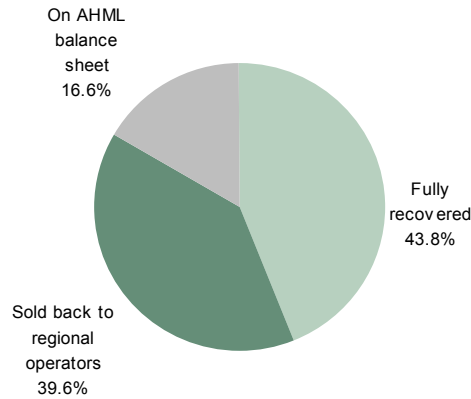
AHML classifies its mortgage loan portfolio into five categories:

- **Standard:** No payment delays in the last 365 days, no apparent legal risks in the mortgage, and the pledged property is in good condition. On 30 June 2006, this category made up nearly 92% of the entire portfolio.
- **Requiring attention:** Minor payment delays have occurred and the borrower's financial situation has deteriorated, but the collateral is in order (7.22% of the portfolio).
- **Requiring special attention:** There have been over four payment delays within the last 365 days and payment delays of more than 30 days, but there are neither increased legal risks nor minor damage to the pledged property (0.85%).
- **Doubtful:** There are serious legal risks to the mortgage and third party claims on the pledged property. AHML currently has no mortgages in this category.
- **Default:** There has been payment default of over 90 days, along with serious legal risks and irreparable damage to the pledged property. On 30 June, AHML had 52 defaulted mortgages, the share of which in the portfolio was 0.26%.

AHML principally has two options in the case of a default: Pursue the borrower and liquidate the collateral, or sell the mortgage back to the regional partner that originally sold it to AHML. Until Nov 2005, under all its contracts with regional partners, AHML had the right to sell back defaulted mortgages (at the residual value) to regional partners. It was then obliged to pay compensation in the amount of 50% of a partner's loss if the defaulted mortgage was wound up within a year. From Nov 2005 on, AHML has allowed its regional partners to eschew this option at the cost of lowering the commission paid to them.

As of 1H06, AHML registered 325 defaulted mortgages totalling \$7.5mn. Their fate is shown in Figure 9.

Figure 9: Defaulted mortgages history



Source: AHML, Renaissance Capital estimates

As a method of limiting credit exposure on regional partners, AHMLs sets credit limits. The agency's limit-setting methodology is, for the most part, transparent and takes into consideration the partner's size, capital adequacy, financial stability, and credit history. The limits are monitored and reviewed on a regular basis. However, those established for most active regional partners are relatively high, compared to AHML's mortgage portfolio volume.

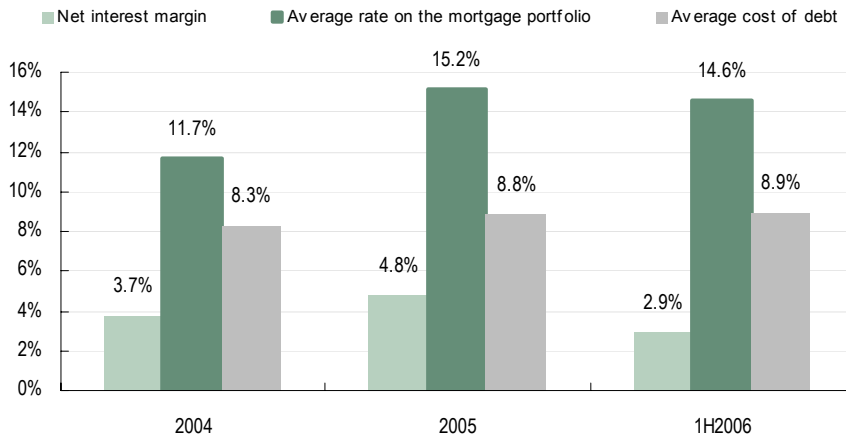
An additional credit risk for AHML is its short-term investment portfolio. AHML invests in bank instruments with low credit risk, and places cash with the top 30 Russian banks. Its list of banks is approved by the AHML supervisory board.

## Profitability

The primary source of AHML's income is interest on its mortgage loan portfolio. Two other, less significant, sources of revenue are income on financial investments (i.e., AHML's liquidity cushion) and commissions from servicing the mortgage portfolios sold. The greatest expenses are interest on bonds, overhead (personnel, etc.), and commissions (which range from 0.5% to 2%) paid to regional partners.

AHML's net interest margin is lower than most Russian banks', mainly because the agency does not finance long-term assets with short-term liabilities. Indeed, the average rates on the mortgage portfolios are comparable to the levels seen in the banking system, while the cost of funding is clearly above that of banks, which refinance with a mix of interest-free current accounts; short-term money market funding; and repo, corporate, and retail deposits.

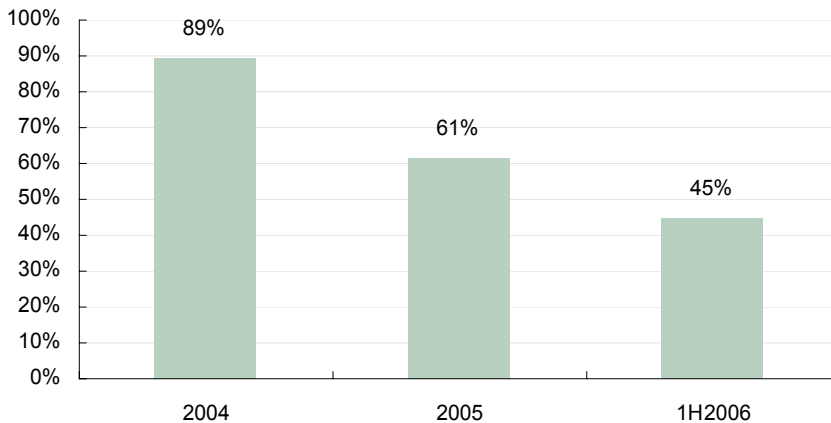
Figure 10: AHML interest margins



Source: AHML, Renaissance Capital estimates

AHML cost efficiency has improved over the years with increasing economies of scale, but we feel there is further potential here.

Figure 11: AHML cost/income ratio



Source: AHML, Renaissance Capital estimates

As a result of lower interest margins, AHML's profitability lags behind that of most Russian banks. But the agency is clearly catching up, thanks to a growing mortgage portfolio and economies of scale. Its 1H06 results should be seen against the background of a significant increase in equity (see the **Capital adequacy** section on page 7).

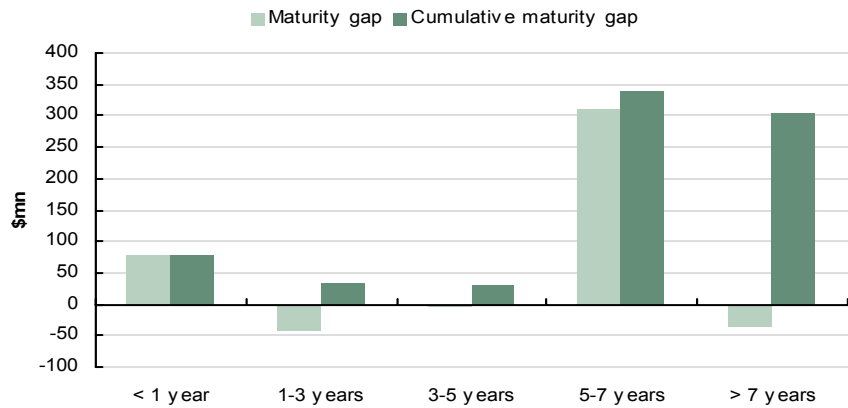
The most significant risk to AHML's profitability stems from pre-payment risk: If borrowers prepay mortgage loans (which they often do in the Russian environment of declining interest rates), the agency does not earn its planned interest income but has to pay interest expenses on long-term bonds. However, so long as demand for mortgages is strong, AHML can always replace pre-paid mortgages with new ones.

## Liquidity

AHML has its mortgage portfolio and financial investments on one side of its balance sheet, and its bonds on the other. The schedule of mortgage and bond redemptions is known, while mortgage purchases from partners are done on a

forward basis and are thus also known in advance. The only element of uncertainty is the pre-payment risk, but this is actually positive for the agency's structural liquidity. Figure 12 depicts the maturity gap (i.e., the excess of assets over liabilities in several maturity brackets), based on estimated asset and debt redemption schedules. The gap in the brackets from one to five years is easily covered by liquid assets, while the cumulative gap is never negative. Thus, AHML has a relatively well-matched balance sheet.

Figure 12: AHML maturity gap analysis



Source: Renaissance Capital estimates

In the event of unforeseen circumstances, the agency would use short-term bank loans as a tool to manage its liquidity flows.

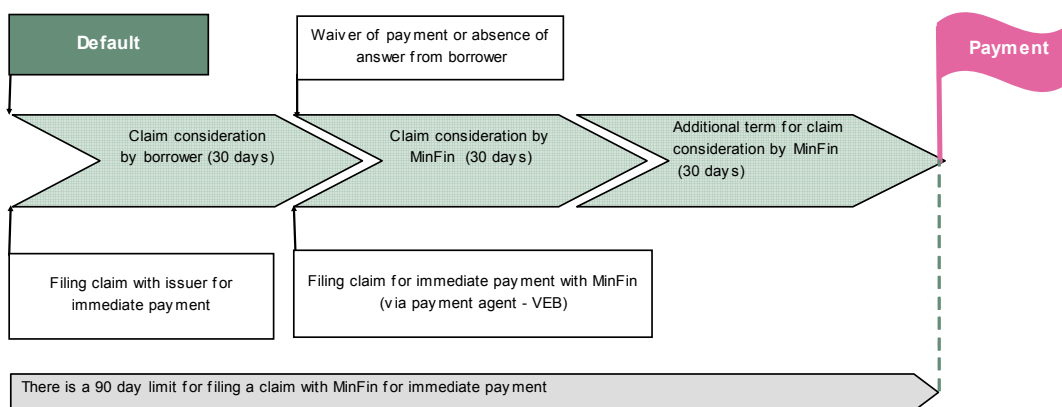
# Appendices

## Appendix 1: State guarantee – the mechanism

According to the Russian State Budget Code, there is only one type of explicit state guarantee. This guarantee is registered and listed in the federal budget as Federal Domestic Borrowing. It is irrevocable and its terms cannot be changed unilaterally. However, in the event of a default by a borrower on the reference obligation of the state guarantee, it does not specify immediate compensation to bondholders but ensures payment in compliance with procedural requirements.

Figure 13 shows the process a bondholder must complete before state guarantee compensation is paid. The minimum time between the date of the borrower's default and the state guarantee payment is two months. The maximum, provided the claim is not contested, is three months.

Figure 13: Procedure for obtaining compensation under a state guarantee



Source: MinFin, Renaissance Capital estimates

Standard & Poor's has 11 criteria that it uses to assess risk associated with guaranteed debt instruments. If the guarantee meets all 11 criteria, S&P views the risk inherent in the guaranteed bonds as equal to the guarantor's risk. In our opinion, the Russian state guarantee does not meet two of the 11 criteria: It does not envisage joint and several liability, and it is not unconditional.

One of S&P's criteria is not applicable to a state guarantee, namely, the automatic transfer of liability to the guarantor's legal successor. The question of the legal successor of a state is regulated by intergovernmental agreements and, in such a case, the treatment of the AHML guarantees would be no different than that of state liabilities to OFZ holders.

At the same time, the Russian State Guarantee meets eight of S&P's 11 criteria:

1. The guarantee is a payment guarantee (i.e., the Russian government will make payments directly to the bondholder and not ensure payments by AHML).
2. Under the guarantee, the government's liability has the status of domestic borrowing (in accordance with the Budget Code and the Law On the Federal Budget), which complies with the equal status of other guarantor's debt requirements.
3. The guarantee is irrevocable.
4. The government's liability to the bondholder remains, should AHML enter into bankruptcy.
5. Russia's Civil Code excludes the possibility of a unilateral assignment of the state guarantee to third parties.
6. AHML bondholders are the beneficiaries of the guarantee.

7. The terms of the guarantee cannot be changed unilaterally by the guarantor.
8. The guarantor is subject to the jurisdiction where the guarantee can be claimed (i.e., the Russian Federation).

The legal basis for state guarantee for the AHML-7 and -8 bond issues is as follows:

- **Russia's Budget Code.** Articles 115 and 116 of the federal Budget Code define a state guarantee and set the main requirements with regard to form, and accounting treatment, in the federal budget.
- **The Law on the Federal Budget for 2006.** The Programme of Domestic Borrowing (Appendix 50 of the Law on the Budget) provides AHML state guarantees in the amount of RUB14bn.
- **Government Decree N628,** "On Adopting Rules for Providing the State Guarantee of the Russian Federation to AHML Debt" (10 Dec 2002).
- **Government Decree N277-r,** "On Providing the State Guarantee of the Russian Federation to the Open Joint-Stock Company AHML" (1 Mar 2006).
- **State guarantee N04-05-10/15** for the AHML-7 issue of RUB4bn (28 June 2006).
- **State guarantee N04-05-10/16** for the AHML-8 issue of RUB5bn (28 June 2006).

## Appendix 2: The AHML bond pricing model

### Step one: The taxation spread

Coupon payments on government and municipal bonds are currently taxed at a rate of 15%, while the figure for corporate issues is 24%. Naturally, this disadvantage is incorporated into bond yields. The loss related to the less favorable taxation is individual for every issue and depends on the coupon rates and the purchase price, so we calculate the taxation spread for each issue.

To get the taxation spread, we determine the bond's cash flow at tax rates of 15% and 24%, and estimate the YtM for the two types of cash flow. The difference between the YtM numbers is the taxation spread.

We have excluded from our pricing model the AHML-4 issue, due to its relative illiquidity. For the other issues, we calculate the guarantee spreads, the taxation spreads, and the credit spreads.

### Step two: The guarantee spread

The guarantee spread is calculated by deducting the taxation spread from the issue's total spread. We can do this only for AHML-1, -2, and -3, which are subject to the full state guarantee for principal and coupon payments.

### Step three: The credit spread

AHML-5 and -6 issues give us an opportunity to calculate how the market assesses the stand-alone AHML credit spread. Principal and coupon payments of these bonds must be discounted along different spot rate curves. For the state-guaranteed principal, the discount rate should comprise the corresponding OFZ spot rate, the taxation spread, and the guarantee spread. Coupons should be discounted at a rate that comprises the OFZ spot rates, the taxation spread, and the stand-alone AHML credit spread.

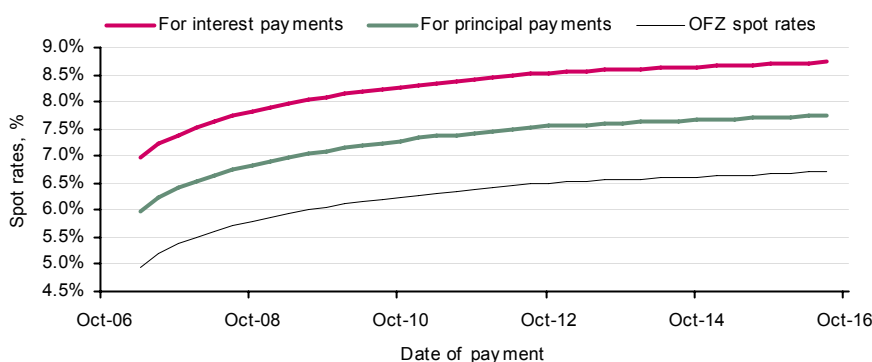
Having the values of the guarantee spread, the taxation spread, the OFZ spot rates, and the market price, we can extract the AHML stand-alone credit spread, i.e., the spread for which the sum of the discounted bond payments is equal to the bond dirty price.

### Final step: putting it all together

Knowing all three spread components (the taxation spread, the guarantee spread, and the fair credit spread), we can calculate the fair coupon rate for AHML-7 and -8 issues. This is the coupon rate at which the present value of the bond's cash flows (including both principle and interest) equals par. As in the pricing of the AHML-5 and -6 issues, we need to apply different discount rates to the principle and to the interest cash flows of AHML-7 and -8 issues:

- The discount rate for each principal payment is the OFZ spot rate + the taxation spread + the guarantee spread.
- The discount rate for each coupon payment is the OFZ spot rate + the taxation spread + the fair credit spread.

Figure 14: Discount rates for AHM-7 issue



Sources: MICEX, Renaissance Capital estimates

## Appendix 3: AHML financial statements

Figure 15: Balance sheet, \$mn

	2003	2004	2005	1H2006
<b>Assets</b>				
Cash and cash equivalents	0.5	1.0	1.4	1.3
Financial assets	27.7	40.9	67.6	77.6
Bank deposits	11.3	26.5	45.0	66.1
Promissory notes	5.5	14.5	22.7	11.5
Other	10.9	0.0	0.0	0.0
Financing of regional operators	2.2	3.9	9.9	23.9
Mortgage portfolio	33.2	157.9	340.1	488.0
Other assets	0.8	1.8	2.1	2.8
Intangible assets	0.0	0.0	0.4	0.3
Fixed assets	0.2	0.5	0.7	1.0
<b>Total assets</b>	<b>64.5</b>	<b>205.9</b>	<b>422.2</b>	<b>595.0</b>
<b>Liabilities</b>				
Debt securities issued	36.7	177.2	367.7	395.9
Deferred revenue	2.1	1.8	1.3	1.1
Other liabilities	0.4	0.4	1.0	2.4
<b>Total Liabilities</b>	<b>39.2</b>	<b>179.4</b>	<b>369.9</b>	<b>399.4</b>
<b>Equity</b>	<b>25.3</b>	<b>26.5</b>	<b>52.3</b>	<b>195.6</b>

AHML, Renaissance Capital estimates

Figure 16: Profit and loss statement, \$mn

	2003	2004	2005	1H2006
Interest income	5.9	13.7	38.6	31.2
<i>interest earned on mortgages</i>	1.0	11.2	37.8	30.2
<i>interest earned on financial assets</i>	4.9	2.5	0.8	1.0
Interest expense	(3.0)	(8.9)	(24.1)	(17.0)
<b>Net interest income</b>	<b>2.8</b>	<b>4.8</b>	<b>14.5</b>	<b>14.2</b>
Fee and commission income	(0.2)	(1.8)	(6.1)	(5.1)
Fee and commission expense	0.4	0.6	0.8	0.3
<b>Operating income</b>	<b>3.0</b>	<b>3.7</b>	<b>9.2</b>	<b>9.4</b>
Operating expense	(2.1)	(3.3)	(5.6)	(4.2)
Other expenses	(0.3)	(0.1)	(0.0)	(0.8)
<b>Profit before income tax</b>	<b>0.6</b>	<b>0.3</b>	<b>3.5</b>	<b>4.4</b>
Income tax expense	(0.4)	(0.0)	(0.8)	(1.1)
Deferred taxes	0.5	(0.1)	(0.1)	(0.0)
<b>Net profit</b>	<b>0.7</b>	<b>0.2</b>	<b>2.6</b>	<b>3.3</b>

AHML, Renaissance Capital estimates

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