

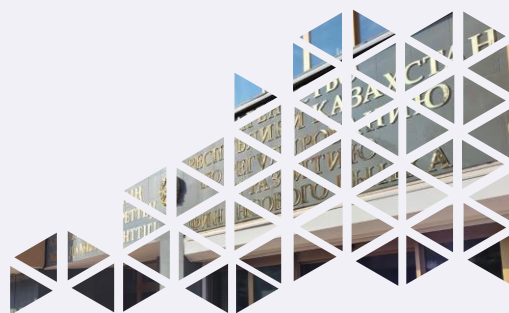


THE AGENCY OF THE REPUBLIC OF KAZAKHSTAN FOR REGULATION
AND DEVELOPMENT OF FINANCIAL MARKET

AQR 2023: DEMOGRAPHIC ANALYSIS

Almaty
2024

KEY INFORMATION



ABOUT THE REPORT

This report presents a comprehensive gender and age analysis of data on individual borrowers analyzed as part of the regular AQR 2023, conducted by the Agency of the Republic of Kazakhstan for Regulation and Development of Financial Market. This marks the second instance the Agency has published such analytical information, following the initial publication of such data in the 2022 Regular AQR Report.

The primary objective of the AQR is to assess the level of credit risk of the banking sector, and to examine the adequacy of banks' reserves to cover potential risks. The data collected in the course of the regular AQR provides valuable insights into the impact of gender and age categories on credit behavior beyond the conventional credit risk metrics, such as credit impairment stage, probability of default (PD) and loss given default (LGD).

This report was conducted based on data on active loan portfolios of 11 large banks, as of January 1, 2023, and on statistical data related to primary defaults and write-offs spanning the period from January 1, 2018, to January 1, 2023—integral part of LGD calculations. The portfolios analyzed within this study include RETEST - mortgage loans, RETCON - unsecured consumer loans, and RETCAR - car loans and other secured loans to individuals. Under the 2023 AQR, the total debt for RETCON portfolio amounted to ₸6.9 trillion, while both RETCAR and RETEST portfolios amounted to ₸1.6 trillion each. When analyzing the RETEST portfolio, it is imperative to take into account the fact that the framework of AQR 2023 does not include «Otbasy bank» JSC—an entity recognized as the primary operator of mortgage programs in Kazakhstan.

METHODOLOGY AND THE SCOPE

This analysis operated under the assumption that the Individual Identification Number (IIN) serves as a reliable source of data for determining age and gender of individual borrowers. The scope of the study encompassed all loans to individuals within the RETEST, RETCAR, and RETCON portfolios. Loans issued to individuals lacking an IIN or possessing an IIN that did not permit the identification of gender and/or age were excluded from the analysis. The analyzed loan portfolio consisted of 6.9 million borrowers, representing an increase of 0.9 million from the AQR 2022, with an aggregate debt totaling ₸10 trillion—indicating a notable increment of ₸3.3 trillion compared to the AQR 2022.

As per data from the Bureau of National Statistics, the adult population of the Republic of Kazakhstan as of the beginning of 2023 was equal to 13.0 million individuals. Therefore, this analysis encompasses approximately 53% of the population aged 18 and older. In the default statistics, men constitute 52% of individual borrowers, women make up 48%, whereas men represent 59% of the Exposure at Default (EAD) for loans that defaulted within a 5-year timeframe (DEFAULT EAD).

MAIN CONCLUSIONS

The analysis revealed that the proportion of accumulated credit losses (stage 3) for loans issued to men stood at 10.3%, whereas for loans issued to women this indicator was equal to 7.8%. As a result, the credit quality, evaluated through the percentage of loans in stage 3, was higher for women compared to men. Within the RETEST portfolio, the proportion of EAD in stages 2 and 3 for men's loans exceeded the same indicator for women's loans by 4p.p., while the share of stage 1 among men was 8 p.p. below that of the women.

Individuals born between 1982 and 2000 (millennials) make up the majority of individual borrowers analyzed in the regular AQR 2023. Their overall credit quality was found to be better than of other generations.

In the default and write-off statistics, men are predominant in terms of number of loans, EAD volume at the time of default (DEFAULT EAD), and corresponding discounted repayments. Notably, within the RETEST portfolio, the average DEFAULT EAD is marginally higher for women than for men, while in the remaining portfolios, men, on average, default with a higher debt burden.

Default statistics on secured loans demonstrate a predominant presence of Generation X borrowers (1963-1981), while default occurrences on unsecured loans are notably led by millennials, particularly among the male demographical group. The highest proportion of defaults among baby boomers (1943-1962) was observed within the RETCON portfolio, specifically among female borrowers.

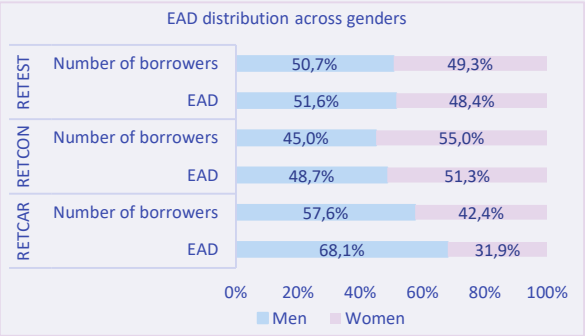
The initial cases of default on unsecured consumer loans have been documented among young male individuals belonging to Gen Z (2001-2005), although their share remains relatively insignificant at present.

The outcomes of this demographic analysis are span from the active loan portfolios to LGD statistics. For a comprehensive understanding of the credit risk landscape of the banks participating in the Regular AQR, the Agency also recommends to read the "Regular AQR 2023 Report".

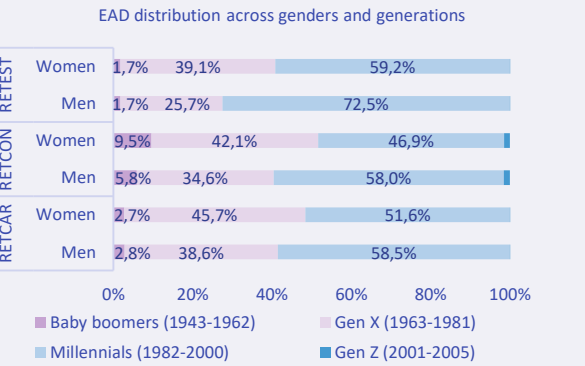
LOAN PORTFOLIO

DEMOGRAPHIC ANALYSIS

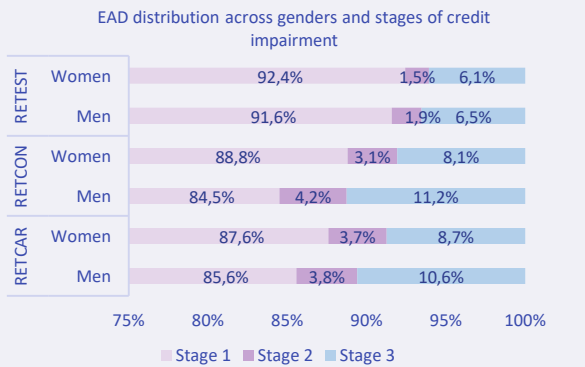
Similar to the previous year, the distribution of EAD within the RETEST portfolio remains evenly balanced across genders. However, in other loan categories, men exhibit a higher propensity for opting for secured loans, while women tend to favor unsecured credits.



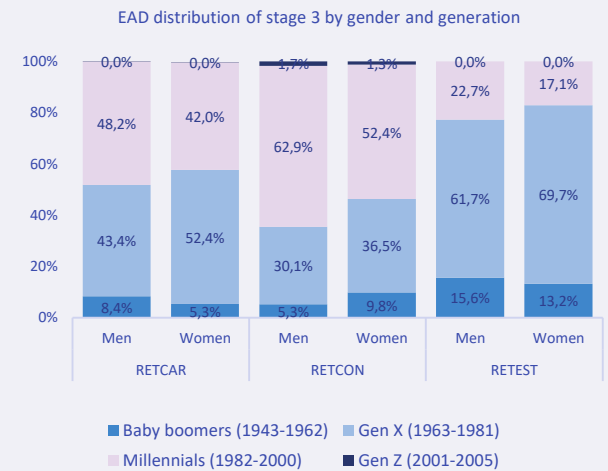
The primary pool of the borrowers comprises millennials. This trend is more pronounced for male borrowers. Notably, the largest of the three portfolios (RETCON) has a relatively high proportion of baby boomer borrowers, especially women, due to their higher life expectancy. However, the share of the baby boomers has decreased across all portfolios compared to the previous year.



The share of EAD in the stage 3 for loans issued to men stands at 10.3%, while for loans issued to women – at 7.8%. Credit quality is higher for loans extended to women across all portfolios. In the RETEST portfolio, the proportion of EAD in stages 2 and 3 for men's loans is 4 p.p. higher than that for women's loans. Additionally, the share of the stage 1 among men is 8 p.p. lower than that among women.



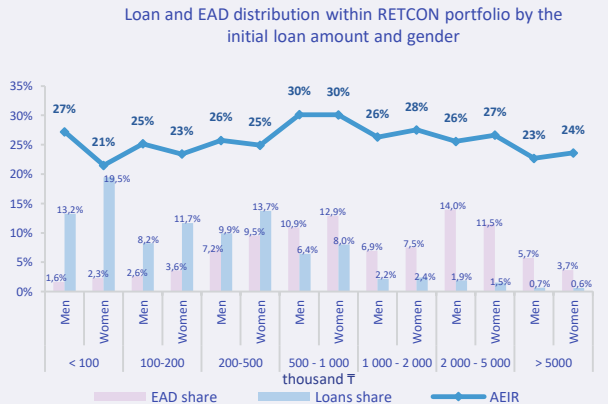
EAD distribution of the stage 3 across generations and genders reveals that the credit quality of the baby boomers remains the lowest. Within the RETEST portfolio, despite having a relatively small share of the overall debt, both male and female baby boomers hold a substantial portion in the stage 3 – 15.6% and 13.2%, respectively. The stage 3 of the RETEST portfolio is predominantly composed of Gen X borrowers, where 61.7% are women and 69.7% are men. Thus, for mortgage loans, the millennials continue to be the most reliable borrowers.



Within the RETCAR portfolio, the Gen X represents 45.7% for women and 38.6% for men. Their proportion in the stage 3 aligns proportionally with the overall debt (52.4% for women and 43.4% for men). In the RETCON portfolio, the millennials dominate in the stage 3: 62.9% for men and 52.4% for women, slightly surpassing the overall share of the millennial's EAD in this portfolio. However, across the three portfolios, the credit quality of the millennial borrowers is higher than that of borrowers from other generations.

RETCON

Within the small loans segment of the RETCON portfolio, the weighted average values of annual effective interest rate (AEIR) for loans issued to men surpass those for loans issued to women. This difference is notable, with a margin of 5.7 p.p. for loans up to ₹ 100,000 and 1.8 p.p. for loans ranging from 100,000 to 200,000 ₹.



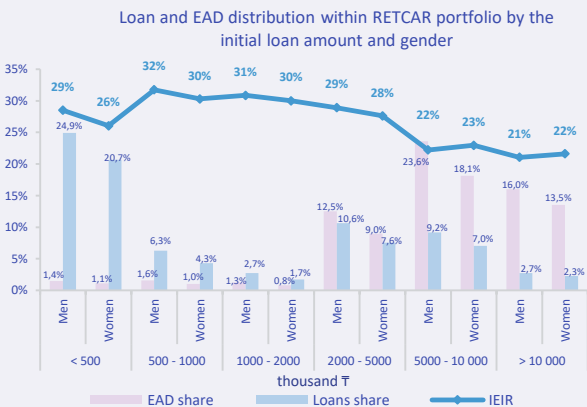
LOAN PORTFOLIO

RETCON

For larger loans, the difference in weighted average AEIRs between loans issued to women and men, does not exceed 1 p.p., except for loans ranging from ₪1 million to ₪2 million. In this specific category, women pay a slightly higher fee, with a difference of 1.2 p.p. Loans up to ₪2 million are dominated by women. However, for larger loans exceeding ₪2 million, the majority of the debt is concentrated among men.

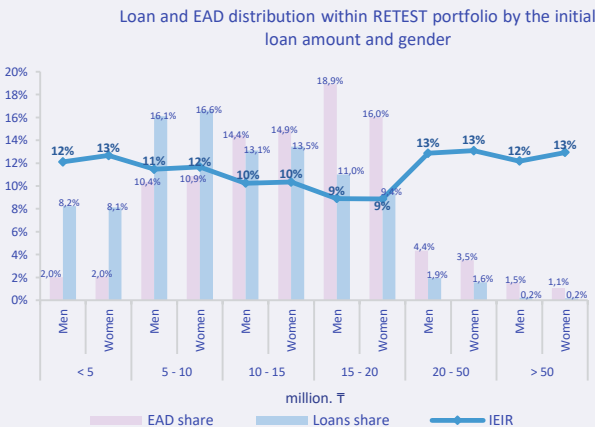
RETCAR

For the RETCAR portfolio, the weighted average AEIR for loans to men does not differ significantly from that for loans to women: 3.3 p.p. lower for loans up to ₪500,000, 1.4 p.p. higher for loans from ₪500,000 to ₪1 million, and 0.9 p.p. higher for loans from ₪1 million to ₪2 million. For loans in the range of ₪2 million to ₪10 million, the weighted average AEIR for women is 1.3 p.p. higher, and for large loans of ₪10 million and above – 0.7 p.p. higher than the weighted average AEIR for men. In the AQR 2022, the weighted average AEIRs for loans to men in all ranges were higher than for loans to women.



RETEST

In the RETEST portfolio, EAD is relatively evenly distributed between men and women among loan categories of ₪5-10 million and ₪10-15 million.



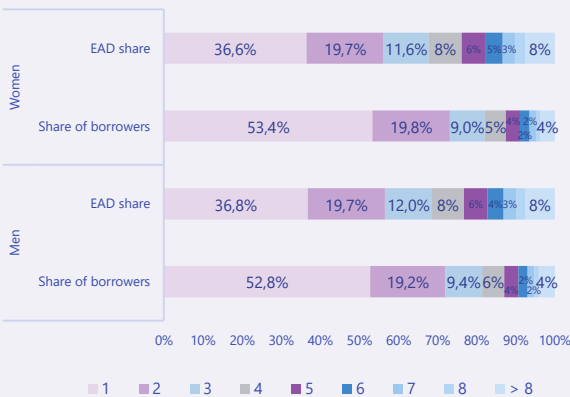
RETEST

In the range of loans over ₪15 million, there is a predominance of loans to men. In the range of loans from ₪15 to ₪20 million, the difference in the share of EAD between loans to males and females is 2.9 pp. The weighted average AEIR is approximately equal for both genders in almost all ranges, in the range of loans over ₪50 million the difference in the AEIR is 0.7 p.p.

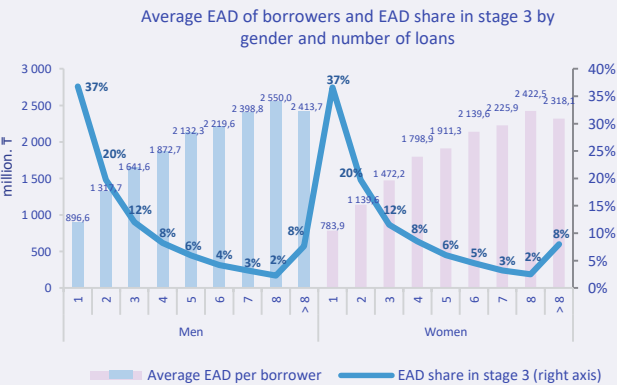
GENDER ANALYSIS

Analysis of the distribution of the number of loans per borrower among men and women shows minimal differences in their behavior in this aspect. On average, both genders take two loans each, although women have a slightly greater tendency to take multiple small loans. The maximum number of loans taken out by a single male borrower is 69, 10 fewer than the last year's leader, while among women the maximum number of loans remains unchanged at 116.

EAD and borrower distribution by gender and number of loans



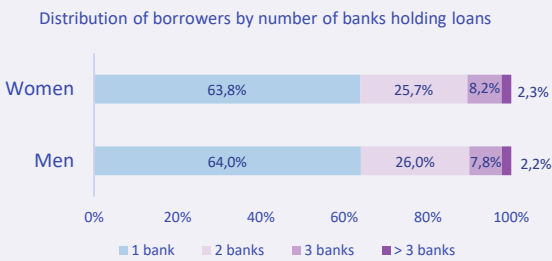
The highest share of EAD in stage 3 is observed among borrowers with 1 loan: 36.8% for men and 36.6% for women. The average EAD for such borrowers is ₪651.6 thousand for men and ₪466.7 thousand for women.



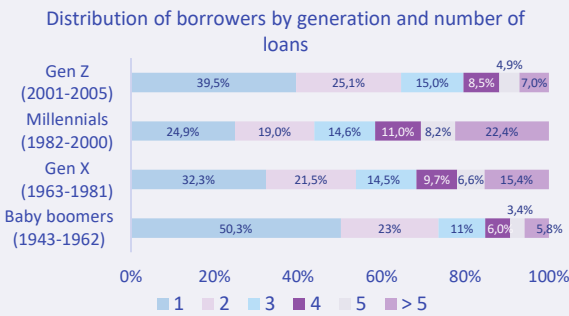
LOAN PORTFOLIO

GENDER ANALYSIS

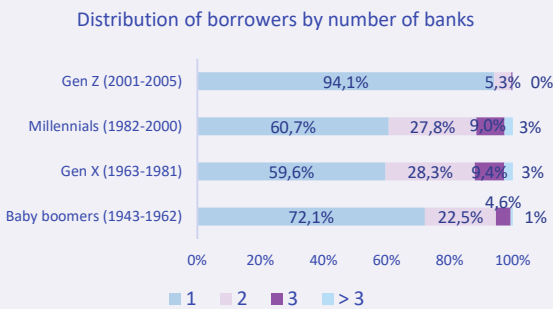
Both men and women, for the most part, prefer to get loans from only one bank. Equal proportions of women and men (about 64%) have loans in only one bank. About 26% of women and men have loans in two banks, and about 8% of women and men have loans in three banks.



The millennials have the largest shift toward more loans per borrower. Only 24.9% of the millennials have only 1 loan, while 22.4% of the millennials have more than 5 loans, which is 6.8% higher than the last year's share. The baby boomers have the least number of loans, with 50.3% of them having only 1 loan.

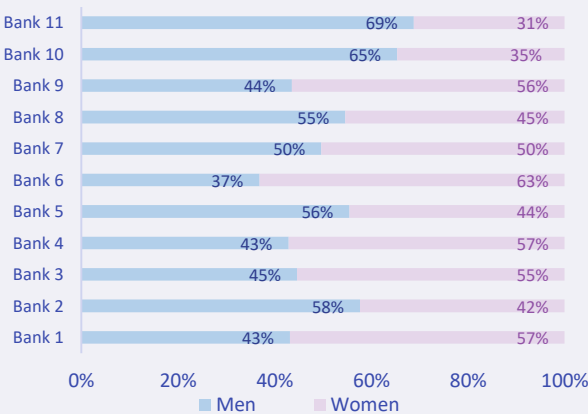


The distribution of the millennials by the number of banks in which they have loans is similar to the Gen X. Thus, about 60% of the borrowers have loans in only 1 bank, and about 9% of the borrowers have loans in three banks. The baby boomers are more conservative, with 72.1% of them having loans in 1 bank. 5.3% of the Gen Z borrowers have started borrowing from more than one bank, but the majority of the Gen Z borrowers (94.1%) have loans from only one bank.



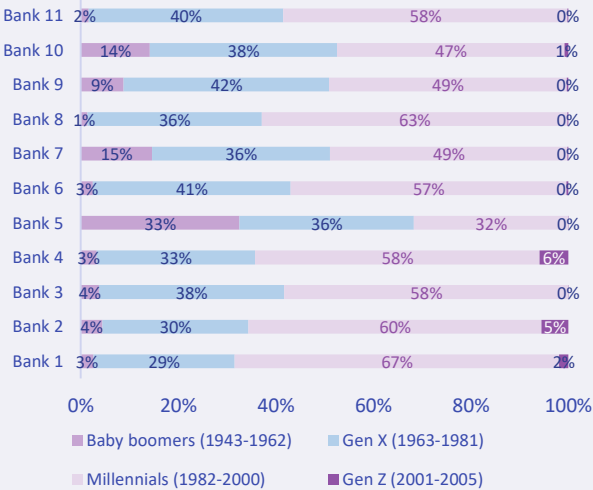
The gender distribution of borrowers by banks shows that in some banks about 2/3 of borrowers are men.

Banks' distribution of borrowers by gender



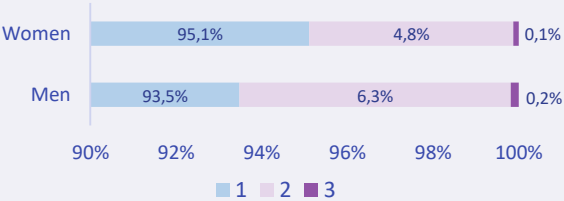
Individual banks have a significant share of the baby boomer borrowers, while the share of borrowers from the youngest generation Z is insignificant for almost all banks.

Banks' distribution of borrowers by generation



Among the three loan types (mortgage, other secured, other unsecured), 95.1% of women have only one type of loans, 4.8% of women have two types of loans, 93.5% of men have type of loans, and 6.3% of men have two types of loans.

Distribution of borrowers by gender and number of loan types



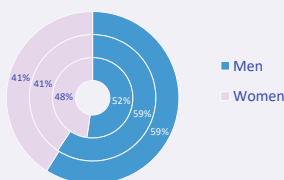
6.3% of the Gen X borrowers and 6.8% of the millennial borrowers have two types of loans; the vast majority of the borrowers have only one type of loans.

DEFAULT STATISTICS

GENDER ANALYSIS

In the data on defaults and write-offs, men dominate by the number of cases, amounts owed at the time of default (DEFAULT EAD) and the corresponding discounted repayments.

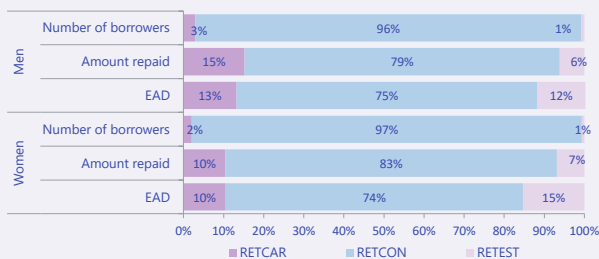
Borrower distribution by gender



The inner circle shows the number of borrowers, the middle circle presents DEFAULT EAD amount, and the outer circle depicts discounted repayments.

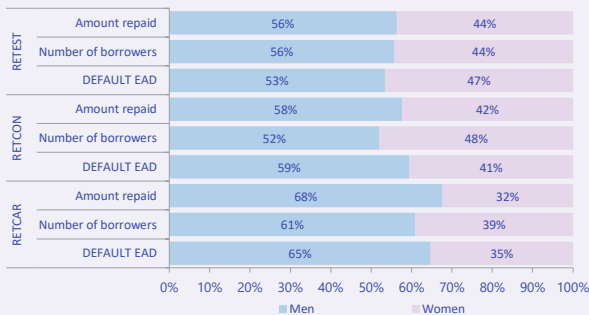
By the number of borrowers the difference between men and women in the default statistics is 4%. The average DEFAULT EAD of male borrowers is ₺545.5 thousand, for female borrowers this indicator is ₺438.3 thousand.

Distribution of DEFAULT EAD and repayments by portfolio type and gender



For the RETEST portfolio, the distribution of the DEFAULT EAD between males and females is nearly even, with a slight predominance of males (53%) over females (47%).

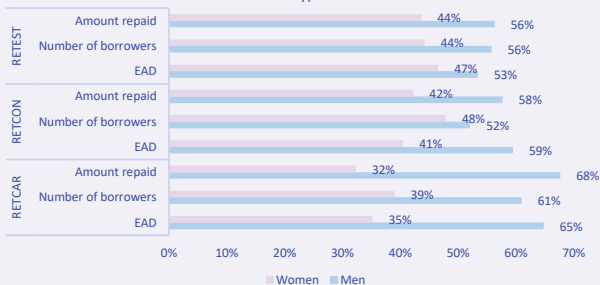
Borrowers, EAD and repayments distribution by gender within portfolio types



In the RETCAR and RETCON portfolios, there is a marked difference in the gender composition of the default statistics. In the RETCAR, men make up 61% of the borrowers and account for 65% of the DEFAULT EAD. In the default statistics for the RETCON portfolio, men also dominate in terms of DEFAULT EAD (59%) and number of borrowers (52%). At the same time, for all portfolios the share of discounted repayments practically corresponds to the share of the DEFAULT EAD, which indicates that there are no significant differences in payment discipline between men and women.

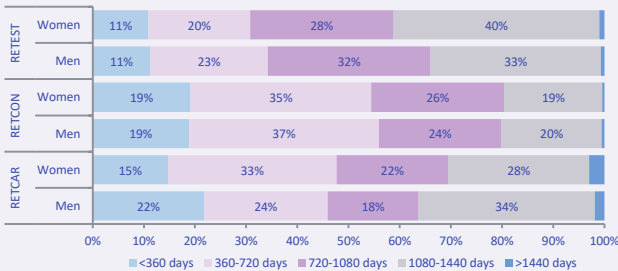
The average DEFAULT EAD for the RETEST portfolio is slightly higher for women than for men. For other portfolios, men on average default with more debt than women.

Borrowers, EAD and repayments distribution by gender within portfolio types



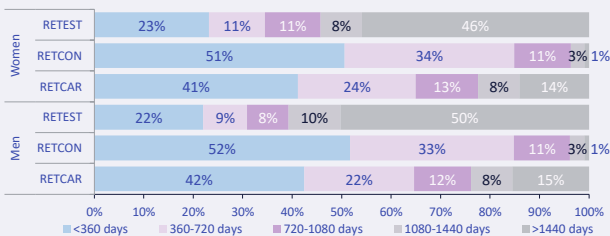
The RETEST portfolio is dominated by cases of prolonged default, especially among borrowers who first defaulted in earlier periods, which is especially typical for female borrowers. In contrast, the RETCON portfolio is characterized by a higher share of recent defaults, which is likely due to the strong increase in unsecured consumer loans in recent years.

Time in default distribution by gender and segment



The age at which loans default for the first time differs significantly for mortgage and other loans. For example, in the default statistics, about 50% of the borrowers with mortgages default on their mortgage for the first time after 4 years of payments, and just over 20% default in the first year. In contrast, for the RETCON portfolio, more than 50% of the borrowers default in the first year. For the RETCAR portfolio, more than 40% of the borrowers default in the first year. There are no significant differences between men and women for this indicator.

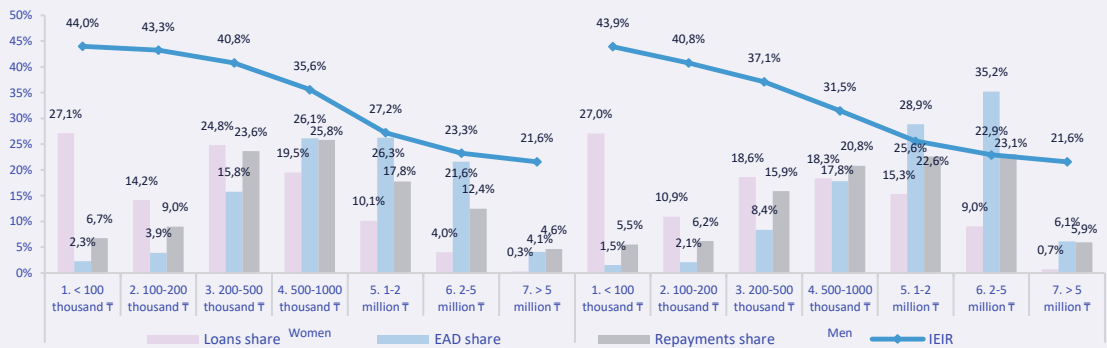
Distribution of borrowers by time between loan start date and default date



DEFAULT STATISTICS

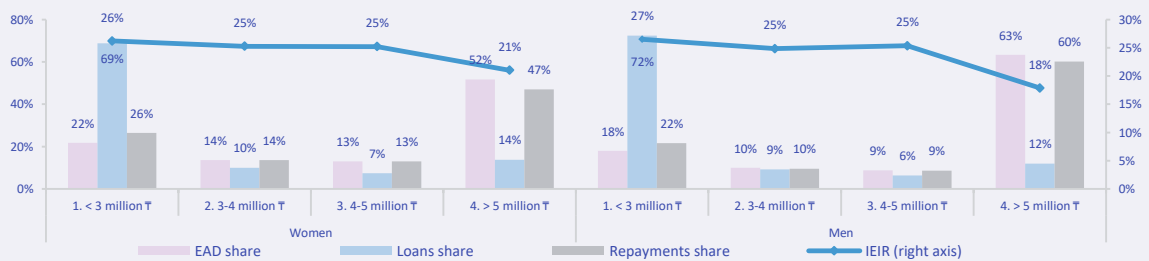
In the RETCON portfolio, defaults on small loans with the DEFAULT EAD less than ₺100 thousand and in the range from ₺200 thousand to ₺1 million are the most common. Among loans to women, the largest volume of the DEFAULT EAD is concentrated in the range from ₺500 thousand to ₺2 million, while among the male borrowers – in the range from ₺1 million to ₺5 million. For the female borrowers, a significant proportion of discounted repayments are in the range from ₺200 thousand to ₺1 million, while among the male borrowers repayments are evenly distributed in the range from ₺500 thousand to ₺5 million. The analysis of the entire RETCON portfolio shows an inverse relationship between the size of the DEFAULT EAD and the weighted average initial effective interest rates.

Number of loans, EAD, and repayments distribution within RETCON by gender and amount of default



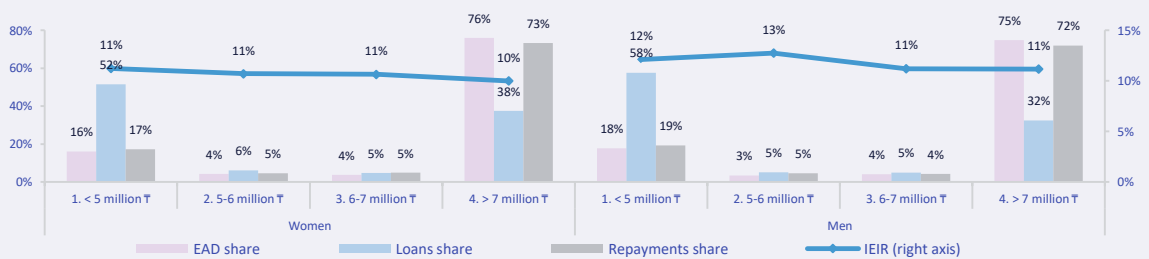
In the RETCAR portfolio, women are more likely to default with smaller loan amounts, predominantly in the less than ₺3 million (22%) and ₺3-4 million (14%) categories. For men, more than half of the amount owed (52%) is concentrated in large loans over ₺5 million. The majority of the loans for both sexes (69% for women and 72% for men) are concentrated in the categories of less than ₺3 million. The repayments of females are more common in the ₺3-4 million range (26%), while the repayments of males are more even in the ₺3-4 million (25%) and over ₺5 million (21%) categories. The IEIRs similarly range from 18% to 27% for both genders.

Number of loans, EAD, and repayments distribution within RETCAR by gender and amount of default



The analysis of the RETEST portfolio shows that in the statistics of defaults, the highest percentage of defaults of women and men is seen in the category of loans over ₺7 million, 76% and 75%, respectively. At the same time, women are more likely to default in the categories of ₺5-6 million and ₺6-7 million` (4% in both categories), while for men this indicator is 3% in the both categories. Women have the highest proportion of loans in the less than ₺5 million category (52%), while men have the highest proportion in the ₺5-7 million category (38%). For both sexes, the largest proportions of repayments are in the over ₺7 million category (73% for males and 72% for females). Differences in the IEIRs between different gender groups and categories are insignificant, which is probably due to the influence of the government mortgage lending programs.

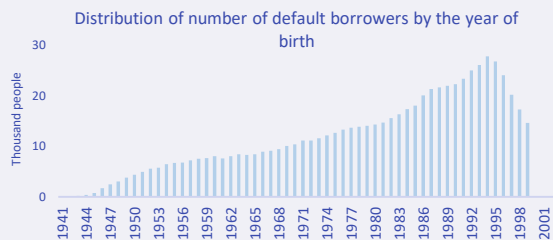
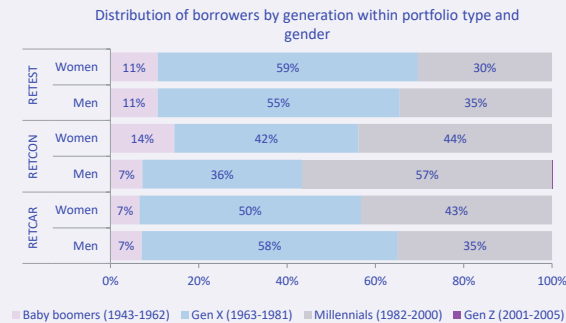
Number of loans, EAD, and repayments distribution within RETEST by gender and amount of default



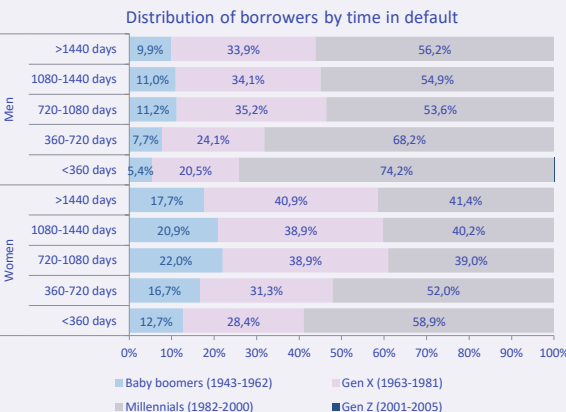
DAFAULT STATISTICS

GENERATIONS ANALYSIS

The Gen X borrowers prevail in the statistics of defaults on secured loans, while the millennial borrowers – in the statistics of defaults on unsecured loans, with this difference being most noticeable among men. The largest share of the baby boomers in the default statistics is recorded in the RETCON portfolio among defaults of the female borrowers. The first defaults on unsecured consumer loans were recorded among men from the Gen Z, but their share is not yet significant.

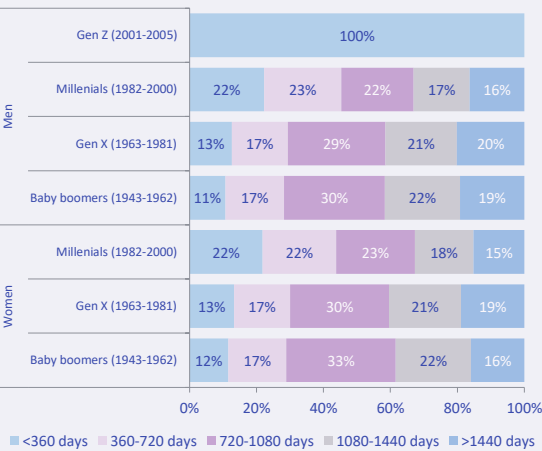


It is noteworthy that in terms of time in default in the categories over 2 years, the millennials dominate among men, while among women the shares of the millennials and the Gen X are approximately equal. At the same time, in the categories under 2 years, the predominance of the millennials is clear.



22% of the millennials have been in default for less than 2 years, in addition the millennials have the smallest share of the borrowers who have been in default for more than 3 years.

Distribution of borrowers by generation and their time in default



AVERAGE PORTRAIT OF FEMALE BORROWERS IN DEFAULT:

Gender: female
Mode age: 29 years
Mean age: 45 years
Default criterion: NPL 90+ /financial distress
Mean number of repayments: 26
Mean amount owed: ₴663 395
Mean amount repaid: ₴25 771
Collateral: none

AVERAGE PORTRAIT OF MALE BORROWERS IN DEFAULT:

Gender: male
Mode age: 29 years
Mean age: 40 years
Default criterion: NPL90+ /financial distress
Mean number of repayments: 29
Mean amount owed: ₴908 075
Mean amount repaid: ₴34 903
Collateral: none

ABBREVIATIONS

| | |
|--------------------|--------------------------------------------------------------------------------------------------------------|
| Agency | The Agency of the Republic of Kazakhstan for Regulation and Development of Financial Market |
| JSC | Joint-stock company |
| BNS ASPAR | Bureau of National Statistics of the Agency for Strategic Planning and Reforms of the Republic of Kazakhstan |
| AEIR | Annual effective interest rate |
| SME | Small and medium business |
| MNE | Ministry of National Economy of the Republic of Kazakhstan |
| AMC | A subsidiary of a bank created to manage distressed assets |
| IEIR | Initial effective interest rate |
| AQR | Asset Quality Review |
| EAD | Exposure at default |
| LGD | Loss given default |
| NPL/NPL 90+ | non-performing loans with overdue payments over 90 days |
| p.p. | Percentage point |
| mln. | Million |
| ₸ | Tenge |

CONTACT INFORMATION

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