strategy&

May 2021

Turkish NPL Purchasing Market

Overview and the way forward

pwc

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Foreword

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Since the enactment of the communique governing the foundation and operations of NPL investment and servicing platforms (so-called Asset Management Companies, “AMCs”) in Turkey in November 2006, NPL investment and servicing has become institutionalized and well regulated by the Banking Regulatory Supervisory Agency (“BRSA”). Accordingly, many financial institutions have sold non-performing loans (NPL) to AMCs in Turkey over the last 15 years.

The NPL purchasing market has hence experienced considerable growth over the years with the increase in number of banks selling portfolios, entrance of new AMCs to the market, as well as banks selling larger portfolios.

Between 2008 and 2020, private banks, factoring, leasing and other financial institutions sold a total of TRY 62.6[1] billion worth of NPLs, in terms of unpaid principal balance (UPB), to the AMCs.

The major driving factors behind this growth were: i) banks and other financial institutions realising the benefits of selling NPLs (e.g., avoiding operational costs, reducing NPL ratios and releasing resources to focus more on new lending); ii) increasing maturity and sophistication of AMCs in the market (e.g.,investment in technological infrastructure and human capital) iii) increasing NPL ratios due to adverse macroeconomic conditions.

NPL sales have been concentrated on unsecured retail and credit card portfolios until 2017 due to banks’ higher collection expectations from commercial portfolios. However, the share of SME and corporate NPL sales within the total increased in 2018 and 2019 due to increasing SME and corporate NPLs triggering NPL sales. Despite the increased sales volume of NPLs in 2018 and 2019, 2020 experienced a sharp decline primarily due to the forbearance measures introduced by the BRSA that limit the Stage 2 loans (loans under close supervision) and NPL growth. Hence, Stage 2 loans and NPL stock have increased to TRY 363bn and TRY 160bn at December, 31st 2020, respectively, and is expected to increase further with the suspension of the forbearance measures that were introduced due to the pandemic.

The substantial increase in Stage 2 loans and NPLs over the last 2 years have resulted in specific action points included in the recently announced Economic Reform Package which was announced in March 2021 to address the problem.

The measures that are aimed to improve the asset quality of the banking industry focus on: i) providing the ability to establish a fund structure to enable domestic and international investors to invest in specific portfolios, ii) the incentivisation of NPL sales especially for secured SME and corporate portfolios, iii) securitization of NPLs and distressed loans and iv) reinforcing the legal framework in which the AMCs operate, v) providing tax incentives for AMCs.

Going forward, we expect to see further growth in NPL sales in the next years, driven by: i) overall volume growth in relation to the growing credit and NPL balances; ii) potential withdrawal of the regulatory forbearance regime due to the COVID-19 pandemic; iii) implementation of the measures outlined in the 2021 Economic Reform Package facilitating NPL and distressed loan securitizations and sales.

In order to estimate the growth in the coming years, we have developed three scenarios in this study based on different macroeconomic assumptions (i.e. expected baseline economic growth, prospering economy with higher growth, conservative economic growth). Our analysis points out that GDP is one of the key drivers of credit and NPL balance growth in the financial sector, thus our scenarios primarily differ by the expected GDP in the forecast period.

According to our base scenario, we expect gross NPL outstanding balance to reach TRY 312 billion by 2023 with an NPL sales volume of TRY 73 billion between 2021 and 2023. Note that the resulting NPL ratio after sales, out of gross loan volume, is expected to be around 5.3% in 2023.

In summary, we expect loans and NPL to grow in line with the GDP estimates (similar to the prior years), which would yield regular NPL sales by banks and other financial institutions.

Hence going forward, we foresee attractive growth opportunities for AMCs in the Turkish NPL purchasing market. We hope you find our study covering historical overview, competitive landscape and expected growth of this market beneficial.

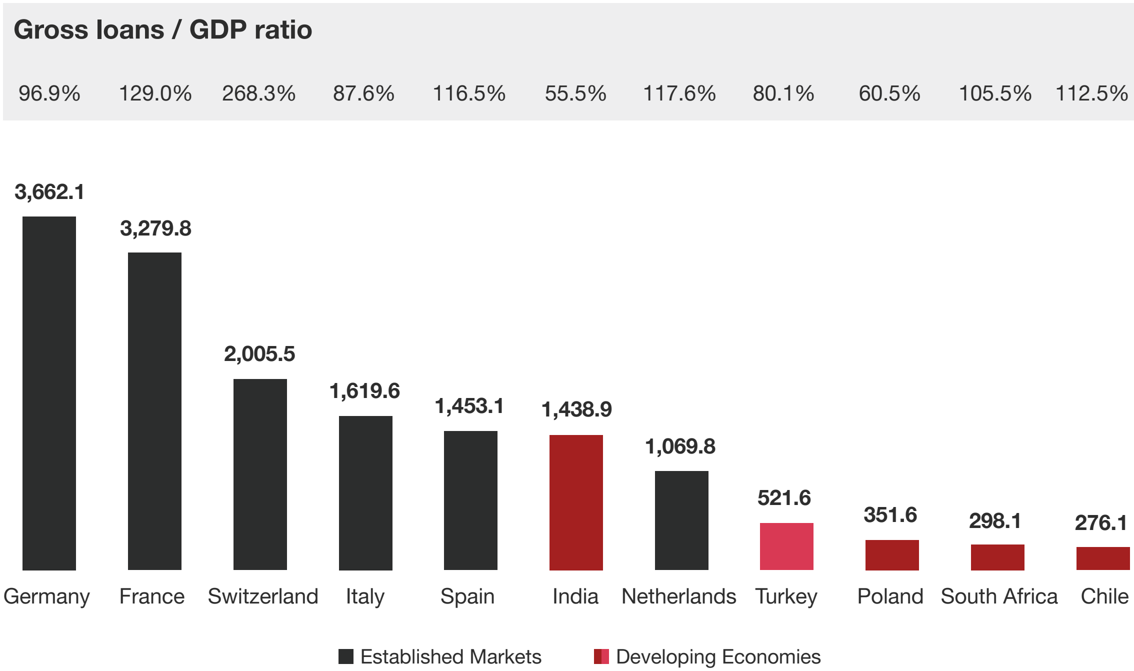
[1] 62.6 bn TL NPL UPB comes primarily from publicly available and accessible data of AMC’s audit reports and only primary market sales

Historical Evolution

Turkish Lending Market[2] Evolution

Exhibit 1

Loan Volume and Loan / GDP Ratio Benchmarking, 2020[3] [USD bn, %]



Source: BMI, IMF, BRSA, Strategy& analysis

Turkey's lending market is still in a growth phase. It had a loan/GDP ratio of 80.1% in 2020 (while it was 75% in 2017) below established markets (i.e. Germany, France, Switzerland, Italy, Spain and Netherlands) and selected developing markets (i.e. South Africa, Chile). Higher loan/GDP ratios in the established markets indicate the loan volume in Turkey to further grow (see Exhibit 1).

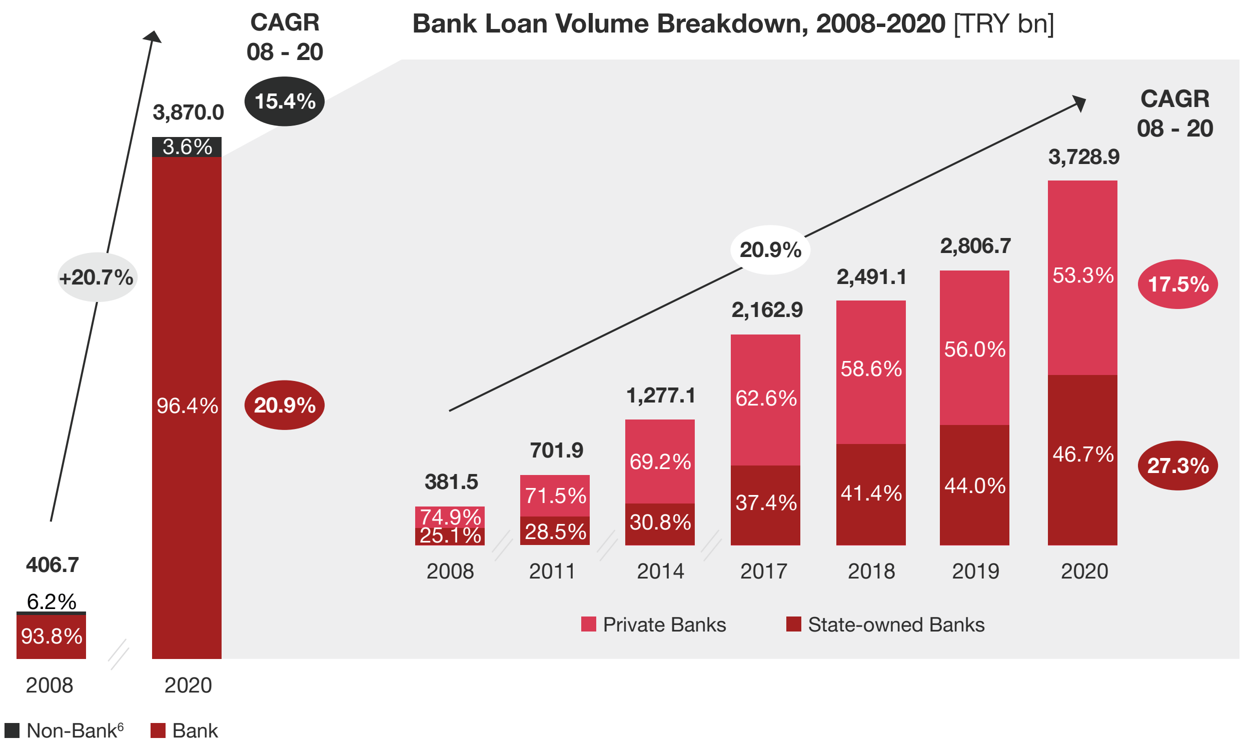
Following the 2008-2009 economic downturn, the lending market loan size grew at a CAGR of 20.7% per annum on a TRY basis between 2008 and 2020, to reach TRY 3,870 billion (USD 522 billion)[4] in 2020. The main drivers of this growth have been macroeconomic growth, portfolio inflows and government initiatives (e.g., the Credit Guarantee Fund in 2017 and Economic Stability Shield in 2020). Following the COVID-19-induced economic downturn in 2020, the government launched a stimulus package, namely Economic Stability Shield, of more than TRY 200 billion as a response in order to provide economic relief for both businesses and consumers.[5]

[2] Turkish lending market includes banks, factoring, leasing and financing companies, and other financial institutions
[3] Gross loans include client loans from banks plus NPLs (USD)
[4] Using the year-end 2020 USD/TRY exchange rate
[5] Ministry of Treasury and Finance of Turkey

Lending Market by Origination Channel

Exhibit 2

Lending Market Breakdown by Origination Channel, 2008-2020 [TRY bn]



Within the overall lending market, banking industry loans constitute the vast majority of the gross loans, representing a share of 96.4% in 2020, and have demonstrated a y-o-y growth of 20.9% between 2008 and 2020, sustaining its dominance over the years (see Exhibit 2).

Within the banking industry, private banks grew by 17.5% between 2008 and 2020. In contrast, the state-owned banks have experienced a growth of 27.3% between the same time period, outgrowing private banks. This rapid outgrowth of state banks was mainly due to i) the establishment of the Credit Guarantee Fund (initiated in 2017) and ii) the Economic Stability Shield (initiated in 2020 in response to the COVID-19-induced downturn) which incentivised the disbursement of loans through state-owned banks.

Following the COVID-19-induced economic downturn in 2020, Turkey launched a stimulus package (Economic Stability Shield) of more than TRY 200 billion and other precautions as a response, including: i) a deferral of loan payments by companies and real persons; ii) loan restructuring and deferral measures for state-owned banks; iii) COVID-19 relief loans to SME, Corporates and Consumers by state-owned banks; and iv) doubling of the Credit Guarantee Fund limit (from 25 billion to 50 billion TRY).[7] These measures resulted in an increase in the loan volume of Turkey greater than historical average.

Factoring, leasing and other non-bank financing companies' share of loans have remained below 10% in Turkey since 2008.

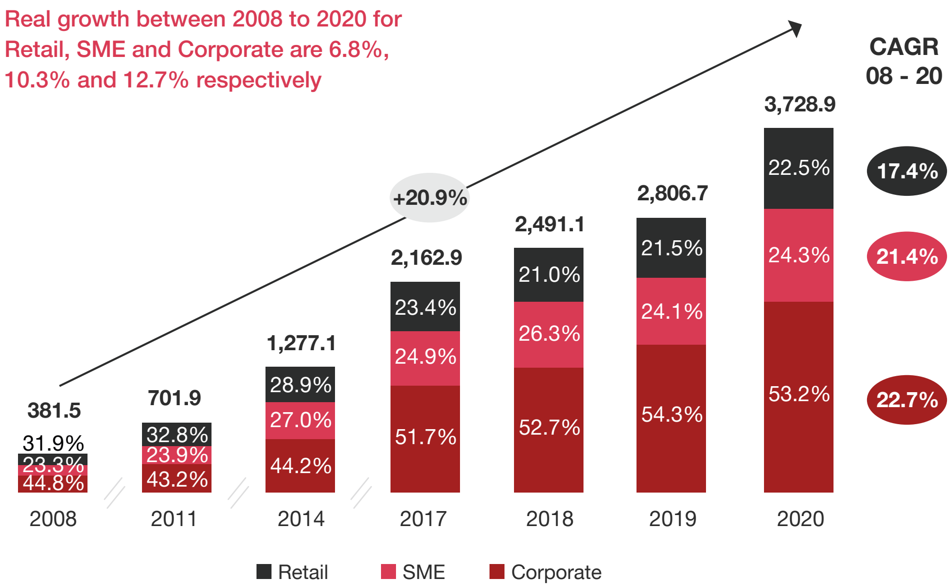
Source: BRSA, Strategy& analysis

[6] Non-bank loan breakdown in 2020 is as follows: Factoring: 32.9%, Leasing: 43.5%, Other Non-Bank Financing: 23.6%
[7] Ministry of Treasury and Finance of Turkey

Lending Market Breakdown by Asset Type

Exhibit 3

Bank Gross Loan Breakdown by Asset Type, 2008-2020 [TRY bn]



Source: BRSA, Strategy& analysis

[8] As of September 2020, according to CBRT

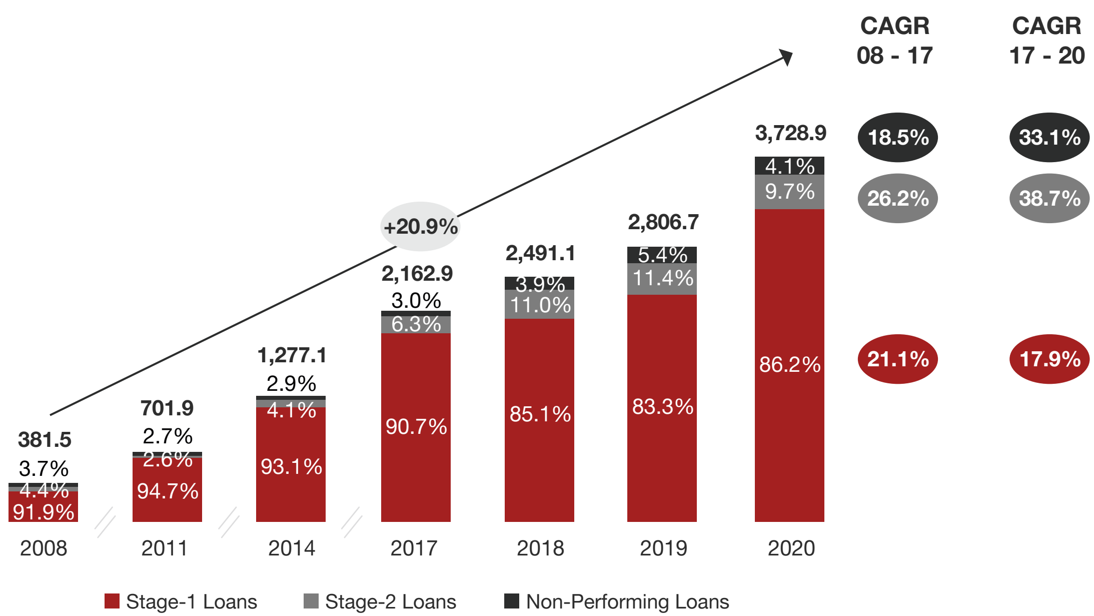
As can be seen in Exhibit 3, after 2011, the share of retail loans decreased, partially due to regulations to control consumer spending (e.g., the introduction of limits on credit cards and consumer loans, higher risk weights on credit cards, limitations on usage of instalments for certain product groups) and the government's Credit Guarantee Fund, a guarantee scheme for loans, specifically to SME and corporate (totalling up to TRY 343 billion in guarantees in 2020).[8] With this initiative, the majority of loans (~77.5%) were mostly granted to SME and corporate.

On the other hand, between 2008 and 2020, the growth rate of retail has been 17.4%, whereas the growth rates of SME and corporate were 21.4% and 22.7%; respectively. This growth contributed to SME and corporate segments increasing their share by taking from the retail segment starting from 2011.

Bank Lending Market Evolution

Exhibit 4

Bank Loan Volume Breakdown by Type, 2008-2020 [TRY bn]



Source: BRSA, BAT, Strategy& analysis

From 2014 to 2019, the total share of Stage-2 loans and NPLs has been increasing against the Stage-1. 2020, where the loan volumes increased dramatically, has the characteristic of being a one-off year, rooting from the COVID-19-induced economic downturn in Turkey. One reason behind this increase is the state's policy response to provide economic relief for businesses and consumers during the pandemic (e.g., incentivisation of loan extension with the Economic Stability Shield). Also, with the forbearance measures brought on by the BRSA, the classification criteria of loans were changed (Stage 2 - increased from 30 days to 90 days, NPL - increased from 90 days to 180 days).

It is also important to note that the share of Stage-1 loans peaked in 2011 at 94.7% and since then, decreased gradually to 86.2% in 2020. Although Stage-1 loans came with a higher growth rate (21.1%) until 2017, it lost momentum after 2017; with a CAGR of 17.9%, less than the other segments between 2017 and 2020.

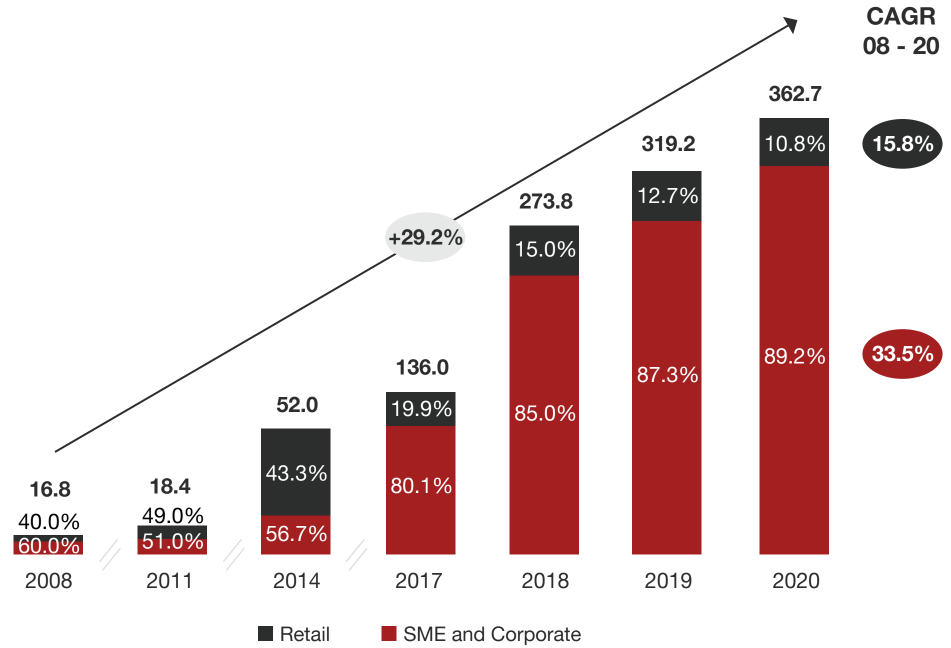
On the other hand, Stage-2 loans have undergone a growth higher than the other segments. The increase in Stage-2 loans have been mainly due to adverse macroeconomic conditions and IFRS 9 implementation (from 2017 to 2018) that resulted in a change in the classification of loans.

Furthermore, from 2011 to 2019, NPL ratios doubled, from 2.7% to 5.4% (see Exhibit 4). In 2020, the NPL volume almost stayed flat despite the strong loan growth. This is primarily due to the extended forbearance measures introduced by the BRSA, extensive loan restructurings for operationally viable companies and protective measures introduced by the Turkish government as a response to the COVID-19 economic downturn. In light of these, the expected increase in Stage-2 and non-performing loans has not yet occurred due to the forbearance measures.

Bank Stage II Loan Volume by Asset Type

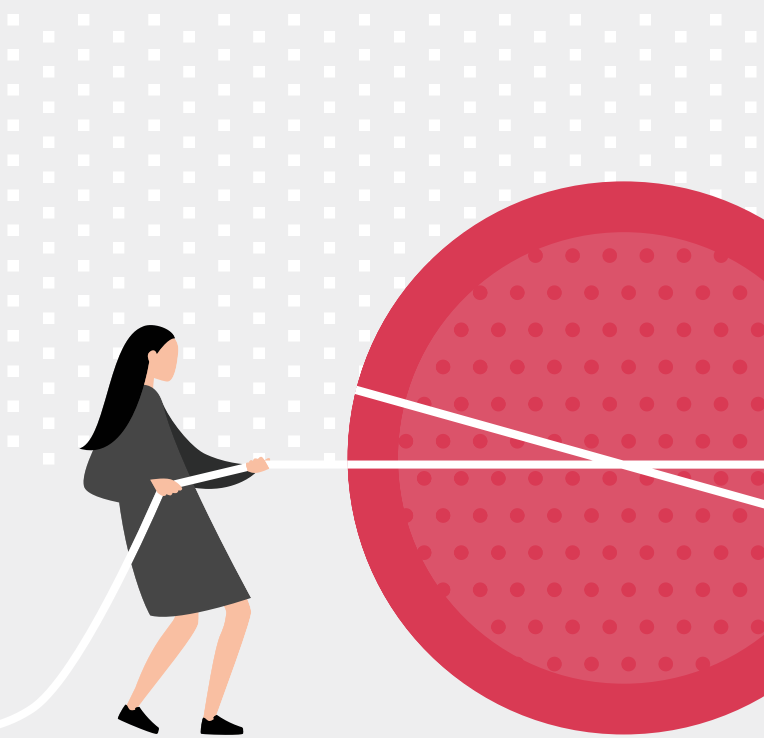
Exhibit 5

Bank Stage II Loan Volume by Asset Type, 2008-2020 [TRY bn]



From 2008 to 2020, the majority of Stage-2 loans consist of SME and corporate loans and its share increased gradually, reaching 89.2% in 2020 (see Exhibit 5). The growth rate of Stage 2 loans have stayed above loan growth despite the forbearance measures put forth by the BRSA. These measures are expected to end in June 2021. Accordingly, if the measures are not extended for another term by BRSA we might expect a further increase in Stage-2 and NPL portfolio in the second half of 2021.

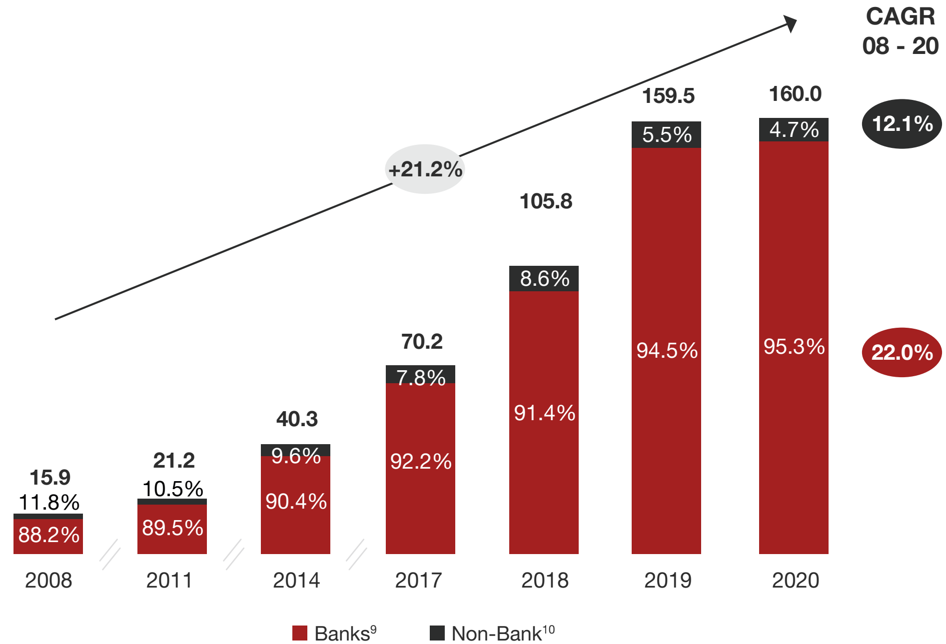
Source: BRSA, BAT, Strategy& analysis



Evolution of Non-Performing Loan Balance

Exhibit 6

NPL Volume by Origination Channel, 2008-2020 [TRY bn]



Banking sector NPLs correspond to 95.3% of the total NPLs in 2020. Furthermore, throughout the years, NPL share of non-bank financial institutions has been gradually decreasing and has dropped below 5% in 2020 (see Exhibit 6).

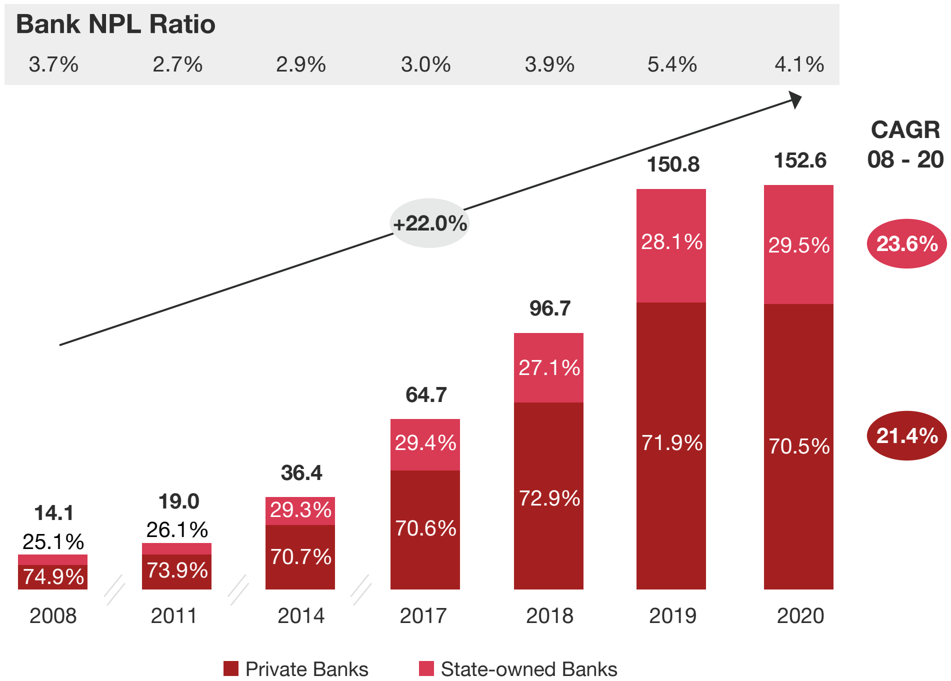
Source: BRSA, Strategy& analysis

[9] Banks include both conventional and participation banks
[10] Non-bank financial institutions consist of factoring, leasing, financing firms

Bank NPL Volume by Bank Type

Exhibit 7

Bank NPL Volume by Bank Type, 2008-2020 [TRY bn]



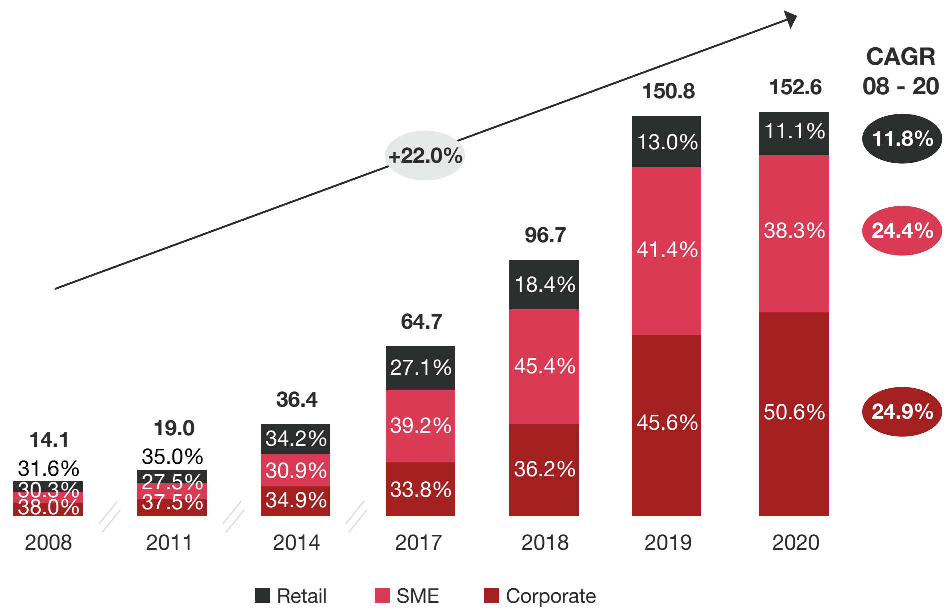
While the distribution of NPLs between private banks and state-owned banks are at a similar level over the years, private banks' share makes up the majority of non-performing loans (see Exhibit 7). Although an increase in the share of state-owned banks in loan volume is observed (see Exhibit 2), it did not fully translate into their share of NPLs yet. Thus, it can be stated that private banks have remained as the primary supplier of NPLs for AMCs until 2020.

Source: BRSA, Strategy& analysis

Bank NPL Balance Breakdown by Asset Type

Exhibit 8

Bank NPL Volume by Asset Type, 2008-2020 [TRY bn]



Source: BRSA, BAT, Strategy& analysis

Looking at the bank NPL volume by asset type, retail NPL share reached 35.0% in 2011, driven by an increase in retail loan volume (see Exhibit 8). However, the retail NPL share decreased from 27.1% in 2017 to %11.1 in 2020, mainly due to i) decline in retail loan volume due to stricter regulations (e.g., limits on the number of instalments, limits on total spending), ii) growth in SME and corporate loan volume iii) increasing SME and corporate NPL volume compared to retail as a result of macroeconomic fluctuations iv) more NPL sales for retail than SME and corporate.

Due to the fact that SME and Corporate loans are increasing with a higher pace than that of retail, their share among the NPL volume has also increased. It is also worth noting that, for SME and Corporate segments, the pace of NPL growth is higher than the pace of gross loan growth. This has also an impact in decreasing retail segment share in the NPL balance.

Due to the increasing share of SME and corporate loans within banks' NPL portfolio and deteriorating asset quality of the banking industry, the government announced The Economic Reform Package (see Exhibit 28) in March 2021, which include specific incentives and measures introduced to facilitate NPL sales.

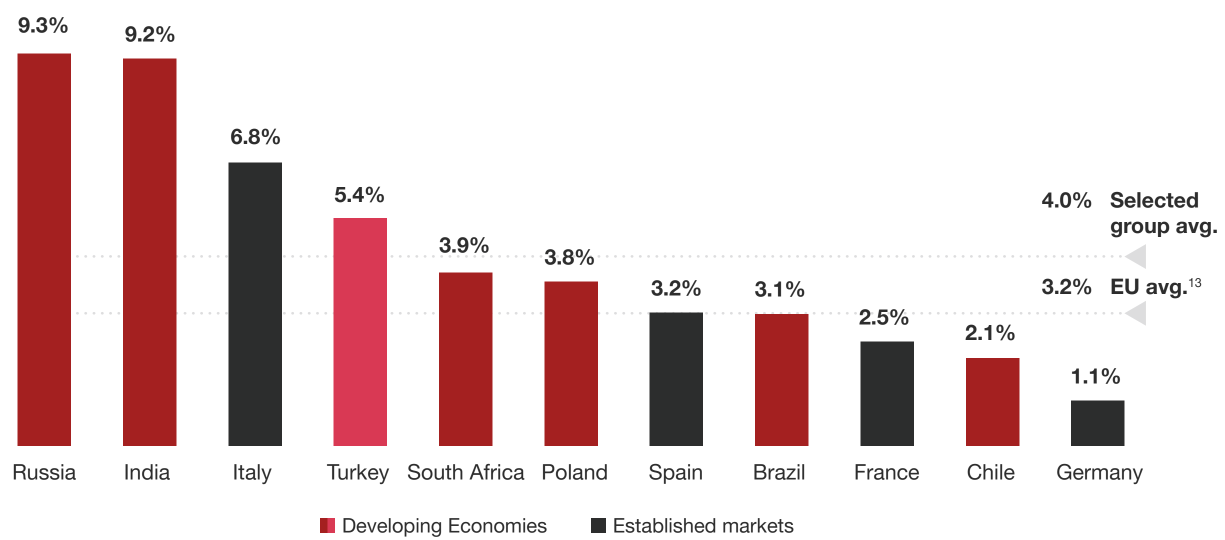
Bank Non-Performing Loan Ratio

Exhibit 9

Bank NPL Ratio[11], 2019[12] [%]

NPL, USD bn

87.5	128.8	96.6	26.8	11.6	13.1	40.9	35.7	69.3	5.3	33.8



Source: World Bank, ECB, Strategy& analysis

11 Bank non-performing loans to total gross loans (%)
12 As of May 2021, at the time of this publication, World Bank reported bank NPL ratios for countries up to 2019
13 EU countries participating in the Single Supervisory Mechanism (SSM) (changing composition)
14 ECB, Debtwire

Due to strong monitoring of banks by the BRSA following the 2001 crisis, relatively limited impact of the 2008-2009 global recession on the Turkish banking sector and the introduction of regulations supporting bank restructuring and recovery practices, NPL ratio of banks in Turkey stood at an average of 3.3% between 2008 and 2017.

However, the financial and economic downturn after 2017 contributed to the increase of the NPL ratio to 5.4% in 2019 above the EU average of 3.2% (Turkey was below the EU average of 4.4% in 2016).

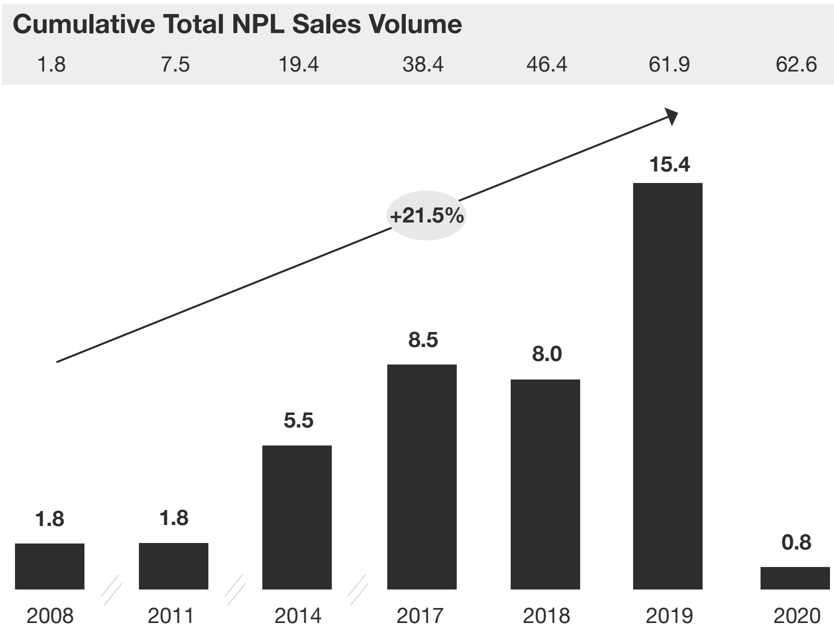
The NPL ratio of banks in selected developed economies (Spain, France and Germany) except Italy, was below the selected group average of 4.0% (please see Exhibit 9). This is due to the amount of NPL sales being higher in the European markets. After the 2008 global recession, NPL balance, which peaked to c. EUR 1 trillion in the EU by 2016, has decreased to c. EUR 510 billion in September 2020 with c. EUR 700 billion of NPL sales between 2015 and 2020.[14]

Such high volumes of NPL sales contributed to the reduction of NPL ratios of above mentioned countries to healthy levels. Turkey might need to follow suit to reduce its NPL ratio to the pre-2017 levels.

Evolution of Non-performing Loan Sales

Exhibit 10

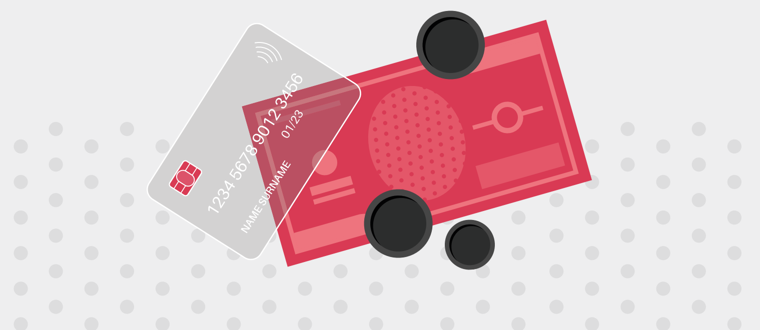
Total NPL Sales Volume[15] (UPB), 2008-2020 [TRY bn]



Non-performing loan sales to AMCs began with the Savings Deposit Insurance Fund's (SDIF) first transactions in 2004 and 2005, the purpose of which was the disposal of problematic loans that originated as a result of the 2001 financial crisis. Following the introduction of the communique specific to AMCs in Turkey in November 2006, Turkish private banks and other financial institutions (e.g., leasing, factoring, non-bank financing companies) started selling NPLs to AMCs in 2008.

Since then, cumulative NPL sales totalled approximately TRY 62.6 billion as of 2020, with y-o-y growth of 21.5% between 2008 and 2019 (see Exhibit 10). The largest NPL sales volume in terms of unpaid principal balance was in 2019 totalling TRY 15 billion. Over the years, banks started selling their NPLs on a regular basis (except for 2020), contributing to the increasing NPL sales volume.

Although NPL sales have been increasing steadily between 2008 and 2019, a decrease was experienced in 2020. This decrease was mostly due to i) COVID-19-induced uncertainty (prevented banks to initiate auctions) and ii) stable NPL volume with the support of forbearance measures introduced by BRSA. Unrealized NPL sales in 2020 are most likely deferred to the future. The total size of sales realized in Q1 2021 is already higher than the total sales volume in 2020 and further sales were announced going into Q2 2021.



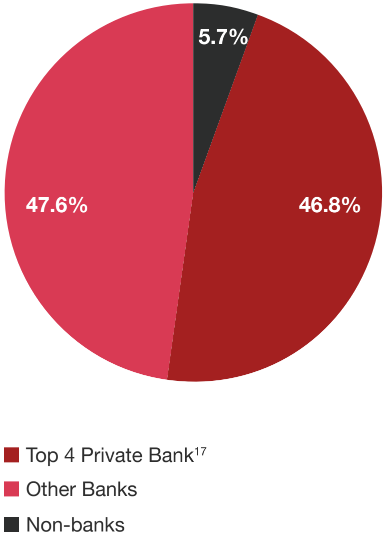
Source: Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[15] Includes only primary market sales

NPL Sales Breakdown by Origination Channel

Exhibit 11

Cumulative NPL sales breakdown[16] (UPB) by origination channel, 2008-2020 [%]



Since 2008, approximately 94.3% of NPL sales in terms of UPB have originated from the banking sector, a majority from private banks (see Exhibit 2).

The top four private banks (based on 2020 asset size), Yapı ve Kredi Bankası, Akbank, Garanti Bankası and İş Bankası, were the primary originators of NPL transactions, four of them in aggregate having sold ~47.0% of the total balance between 2008 and 2020 (see Exhibit 11).

The increasing maturity of the Turkish NPL purchasing market is also reflected in the increasing number of banks and non-bank financial institutions initiating auctions, from 7 in 2008 to 38 in 2019. This is a strong indication of a healthy and sustainable NPL purchasing market in Turkey supported by a diverse seller base.

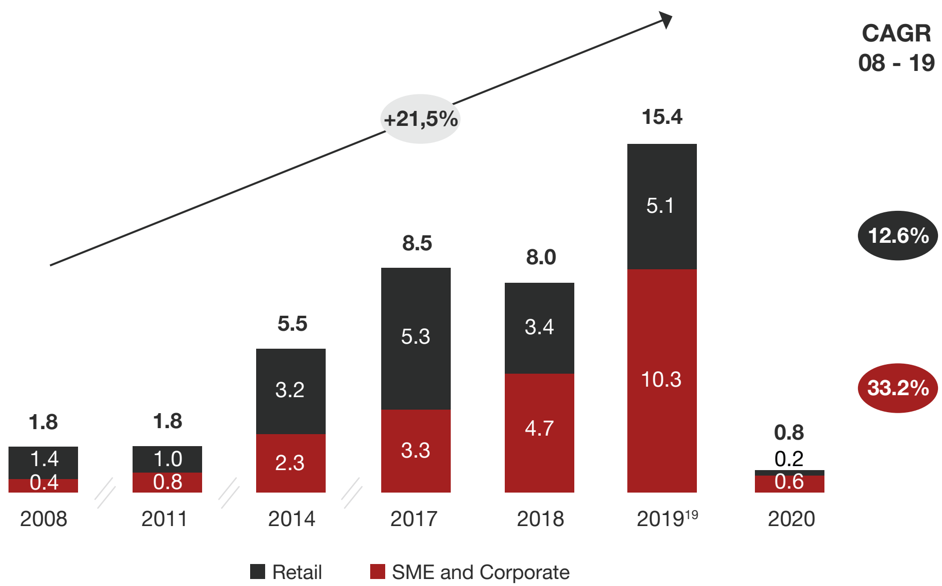
Source: Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[16] Consists of publicly available data of TRY 59.3 billion NPL UPB and only primary market sales
[17] Yapı ve Kredi Bankası, Akbank, Garanti Bankası, İş Bankası

NPL Sales Breakdown by Asset Type

Exhibit 12

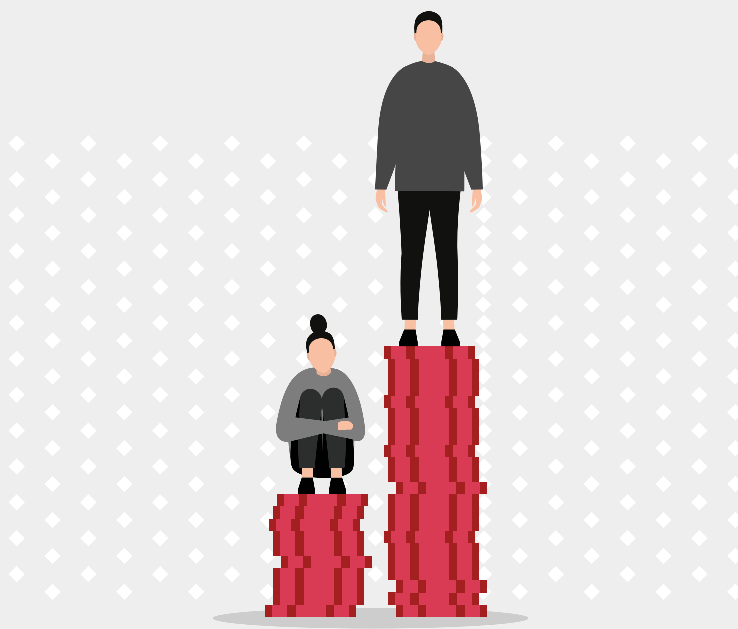
NPL Sales Breakdown[18] (UPB) by Asset Type, 2008-2020 [TRY bn]



Until 2018, retail NPL sales have made up the majority of total sales (see Exhibit 12). After 2018, retail NPL sales started to lose its share to SME and corporate. The increasing share of SME and corporate loans within Stage 2 and NPL portfolios of banks was the main contributor to the increasing share of SME and corporate NPL sales in 2018 onwards.

As a result, share of retail in NPL sales has started to decline, while SME and corporate has almost doubled their shares from 2017 to 2020.

NPL sales in 2020 were limited as a one-off year mostly due to forbearance measures and COVID-19 induced uncertainty and partly due to strong loan growth.



Source: Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[18] Consists of publicly available data of 59.3 billion TL NPL UPB and only primary market sales including banks and non-bank FIs
[19] Including Birleşim's one-off transaction worth TRY 3.7 billion

AMC Competitive Landscape

Overall NPL purchasing market size and evolution

Exhibit 13

Turkish Asset Management Companies General Information

AMCs	Years in Business	Main Shareholders	Cumulative UPB Share[20] (%, 2008-20)	Cumulative Investment[20] (%, 2008-20)	Collection (TRY mn, 2020)	Total Asset Size (TRY mn, 2020)
Gelecek[21]	14	Fiba Group	27.3%	34.8%	550.7	1,197.1
Dünya[21]	13	Vector Holdings, Vector Investments, EBRD	24.0%	26.4%	330.2	1,332.4
Birleşim[21]	16	TMSF	9.8%	3.2%	101.8	314.6
Birikim[21]	5	Altınhas Holding, Ak Faktoring	7.6%	7.8%	105.9	234.6
Sümer	6	ASV Holding	6.9%	4.2%	106.9	183.8
İstanbul[21]	12	Ünlü Yatırım	5.9%	5.8%	119.0	242.4
Efes	10	İş Yatırım Menkul Değerler, İş Portföy, İş Leasing, İş Faktoring	5.8%	4.8%	69.0	223.2
Mega	6	Private individuals	3.1%	5.4%	15.2	166.3
Arsan	3	Arsan Dokuma	2.0%	1.4%	40.9	57.9
Emir	4	Private individuals	2.0%	1.3%	60.8	125.7
Hedef	6	Private individuals	1.4%	0.8%	29.0	56.3
Denge[21]	8	Lider Faktoring	1.4%	1.9%	35.5	114.9
Met-Ay	4	Private individuals	1.2%	0.2%	3.6	34.0
Boğaziçi[21]	9	Private individuals	0.7%	0.8%	120.4	355.7
Armada	3	Private individuals	0.6%	0.5%	151.3	125.5
Doğru	2	Private individuals	0.2%	0.3%	17.7	40.6
Adil	2	Private individuals	0.2%	0.3%	11.0	23.5
Yunus	5	Delfin Holding	n/a	-	6.1	64.3

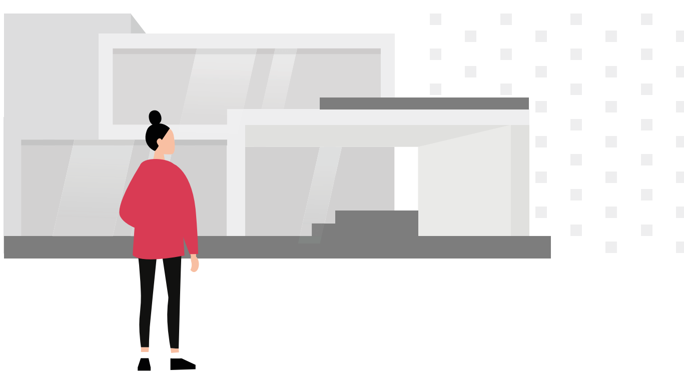
Source: Audited annual financial statements of Asset Management Companies, AMCs' websites, Strategy& analysis

[20] Primary market only. Does not include those NPL sales transactions with buyers not publicly disclosed. Assumed equal share of UPB among buyers in case of multiple buyers for a transaction, where sales amounts to each buyer is not explicitly stated

[21] These players, with current names listed, have had different names throughout their lifetime in the market

As of 2020, there are eighteen AMCs active in the market (see Exhibit 13). Incumbents Gelecek and Dünya, which have been active in the market since 2008 and gained significant scale, have the largest shares of cumulative UPB amount and total asset size. Birikim (the third largest player excluding SDIF-owned Birleşim), Sümer and İstanbul, are following the incumbents in terms of asset size. In addition to these top players, some smaller players such as Emir and Hedef can be considered as 'generalists' since they cover a wide spectrum of NPL portfolio types. On the other hand, there are specialist boutique players, such as Boğaziçi, Mega, and Met-Ay, which generally focus on single-ticket items.

Operational excellence, IT/technical infrastructure and funding capabilities are some of the differentiating factors among AMCs in the competitive landscape. Companies that excel in these aspects outperform their competitors in the market. Additionally, large portfolio size hence economies of scale also support competitiveness of AMCs since they can manage operations more efficiently.



AMC Comparison by UPB Acquisition Share Evolution

Exhibit 14 A

AMC Share Evolution by Transaction[22] UPB Purchase Size [%, primary market]

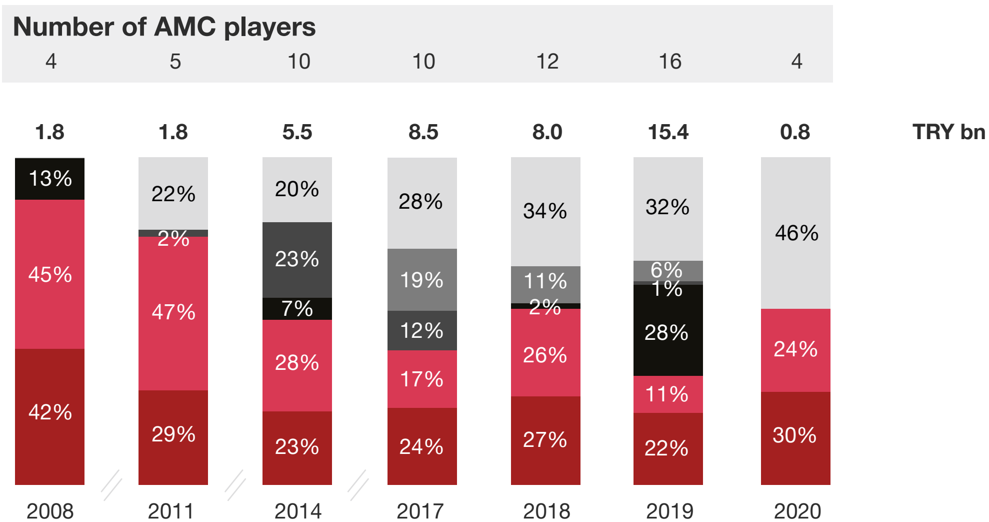
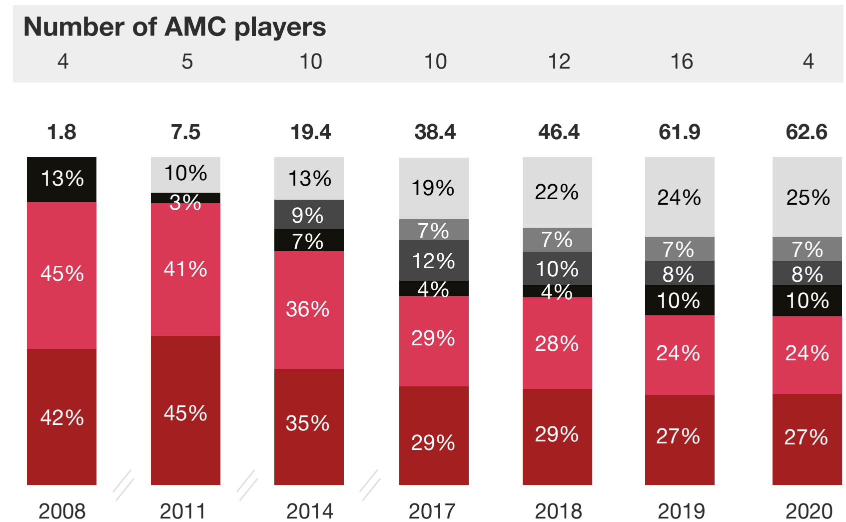


Exhibit 14 B

AMC Cumulative Share Evolution by Transaction[22] UPB Purchase Size [%, primary market]



Gelecek | Dünya | Birleşim | Birikim | Sümer | Other Players[23]

As seen in Exhibit 14a, Gelecek and Dünya, long-time incumbents and scale-players, have gained the largest share of transactions with consistent acquisitions unlike the other players. As latecomers, Birleşim and Birikim have been achieving scale since 2014 by being in the top five in terms of cumulative UPB shares. Birleşim had the largest share in 2019 with a one-off transaction of TRY 3.7 billion UPB that has contributed immensely to its cumulative UPB share.

As demonstrated in Exhibit 14b, Gelecek and Dünya, long-time incumbents and scale-players, have gained the largest share of transactions since 2008 cumulatively. Following 2011, other players (excluding the top five) have started to increase their footprint on the market collectively, eventually reaching 25% of UPB shares cumulatively. This 25% is fragmented across more than 10 players.

Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

22 Does not include those NPL sales transactions with buyers not publicly disclosed. Assumed equal share of UPB among buyers in case of multiple buyers for a transaction

23 Top 5 players in terms of cumulative UPB share are Gelecek, Dünya, Sümer, Efes and Birikim for those transactions with buyer information publicly disclosed. Other players constitute of İstanbul, Efes, Mega, Arsan, Emir, Hedef, Denge, Met-Ay, Boğaziçi, Armada, Doğru, Adil, Yunus

The Way Forward

Exhibit 15

Forecast Methodology Overview

Economic Growth

- Based on our regression analysis using yearly and quarterly historical data of 10+ years, certain macro-economic indicators have significant impact on loan volume and NPL balance
- Therefore, the following indicators were forecasted:
  - Real & Nominal GDP
  - CPI
  - Unemployment rate
  - FX rates

1 Loan Growth

- Expected growth for gross loan volume was estimated by asset type (Retail, SME and Corporate)
- Retail, SME and Corporate TRY loans are highly correlated with Turkey's gross domestic output
- Estimates for future Retail, SME and Corporate TRY loans growth were calculated based on nominal GDP growth and analyst views
- Estimates for future Retail, SME and Corporate FX loans growth were calculated based on historical growth and analyst views

2 NPL Balance

- First, net NPL inflows,[24] by asset type (Retail, SME and Corporate), were forecasted
- Retail forecasts were based on several macro-economic indicators:
  - Real GDP growth
  - Unemployment rate
- SME and Corporate forecasts were based on several macro-economic indicators:
  - Real GDP growth
  - FX rate
- Upcoming year's NPL outstanding balance was estimated based on NPL inflow change and NPL balance from current year

3 NPL Sales

- It was assumed that NPL sales ratios[25] in the forecast period would remain similar to historical figures by asset type (Retail, SME and Corporate)

Source: Strategy& analysis

We followed a three-step approach, as seen in Exhibit 15, to forecast NPL sales in the Turkish NPL purchasing market throughout 2023. We forecasted expected growth of gross loans, NPL balance and NPL sales volume sequentially using macroeconomic indicators. Our estimations are based on the historical data retrieved from BRSA, BAT[26] and the financial statements of banks, non-bank financial institutions and AMCs as of December, 31st 2020, audited in line with the BRSA regulations.

Our forecast is based on three scenarios (see Exhibit 25 and 26 for assumptions on all three scenarios):

- **Macro-base scenario:** most probable economic scenario, resulting in baseline growth for loan volumes, net NPL inflows and outstanding balance, and NPL sales.
- **Macro-optimistic scenario:** economy prospers, hence optimistic assumptions for macroeconomic indicators (nominal/real GDP) resulting in higher growth for loan volumes, lower growth for net NPL inflows and NPL outstanding balance, and lower NPL sales ratio.
- **Macro-conservative scenario:** lower economic growth, hence conservative assumptions for macroeconomic indicators resulting in lower growth for loan volumes, higher growth for net NPL inflows and NPL outstanding balance, and higher NPL sales ratio.

[24] NPL inflows net of collections and asset write-offs, excluding sales
[25] NPL sales ratio = NPL sales volume / NPL outstanding balance of previous year
[26] The Banks Association of Turkey

Gross Loan Balance Expected Growth

Gross loans are composed of performing and non-performing loans recorded by banks and non-bank financial institutions. The performing side of the gross loan balance are influenced by the following assumptions:

- TRY loans are regressed with nominal GDP growth in addition to analyst views
- FX loans are driven by historical FX loan growth and analyst views

For the performing loan balance growth:

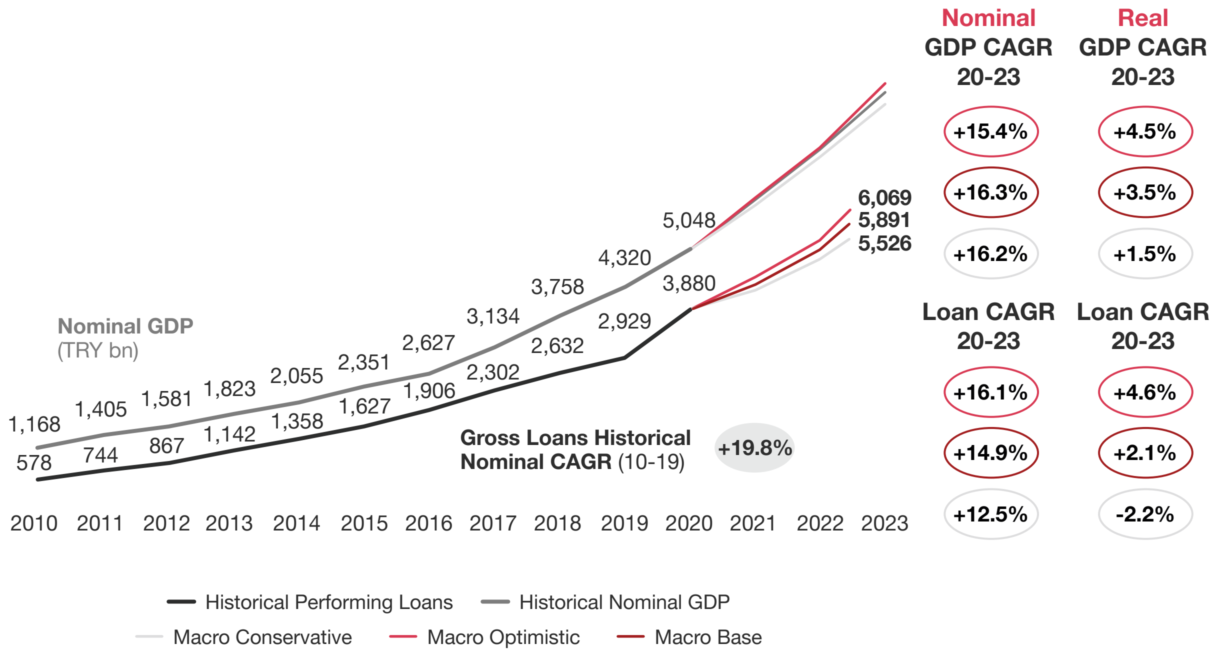
In the macro-base scenario, while we expect growth at lower levels for TRY loans in 2021 than in 2020, we expect mid-teens growth in 2022 and 2023. For FX loans, negative growth is expected in 2021 and we anticipate a ~5% growth per annum in the following years of 2022 and 2023.

In the macro-optimistic scenario, for TRY forecasts we expect mid-teens growth per annum between 2021-2023. We assume FX loans to be stagnant in 2021 and grow by 10% year-on-year in the following years of 2022 and 2023.

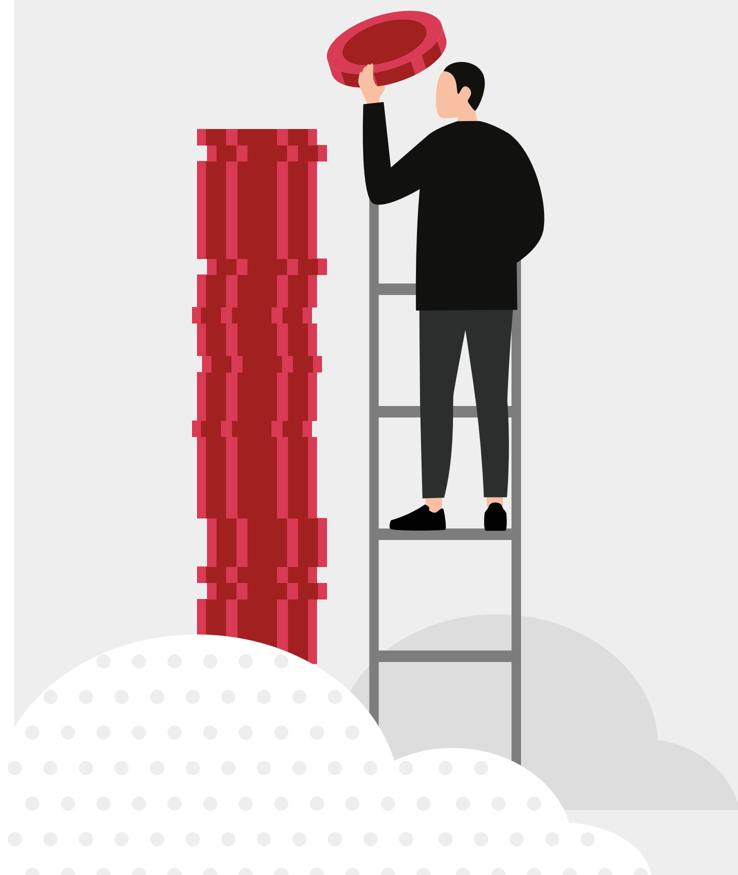
In the macro-conservative scenario, for TRY loans, up to 7% growth in 2021 and mid-teens growth for the following years is expected. Whereas for FX loans, a 20% decline is anticipated for 2021 with a 5% shrinkage per annum in the years after.

Exhibit 16

Gross loans volume expected growth [TRY bn, 2010-23]



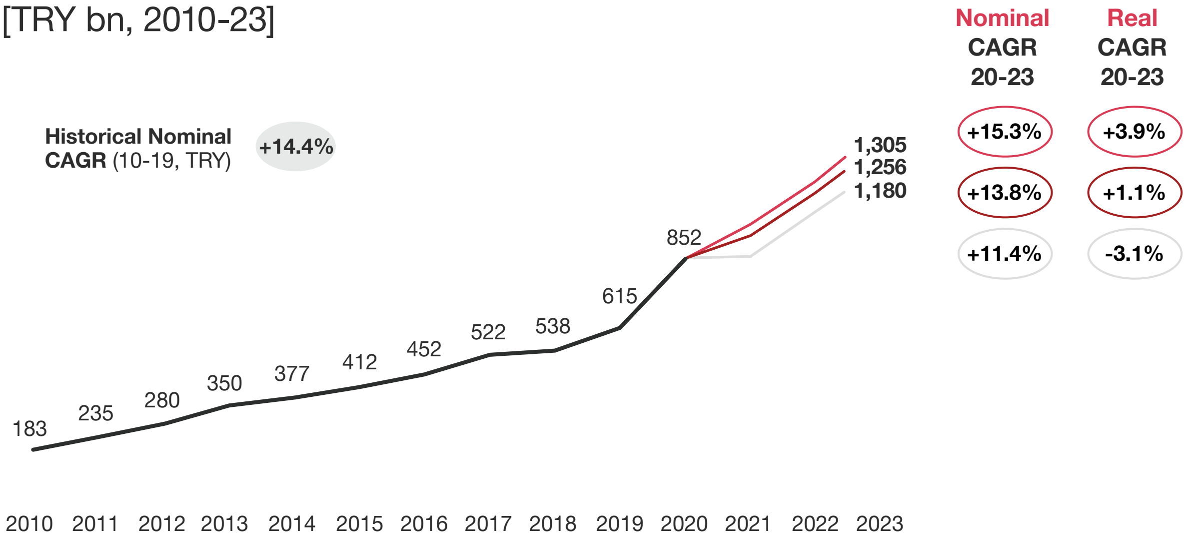
Historically, the Turkish lending market has grown generally in line with the country's overall economic growth. We believe that this relationship will continue going forward. Based on our forecast analysis, by 2023, driven by GDP growth expectations, gross loan volume is expected to reach the TRY 5,526-6,069 billion band, with 15.4-16.3% per annum growth (see Exhibit 16), which is lower than historic growth (2010-2019) in line with the relationship between historical and expected GDP growth. This is also in line with the fact that as loan/GDP ratio increases in a country, the loan growth rate decreases accordingly.



Source: BRSA, IMF, Turkstat, Strategy& analysis

Exhibit 17

Gross Retail loans volume expected growth [TRY bn, 2010-23]



% of Gross Loans Total

2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
31.7%	31.6%	32.3%	30.6%	27.7%	25.3%	23.7%	22.7%	20.5%	21.0%	22.0%	**21.3%**	**21.4%**	**21.3%**

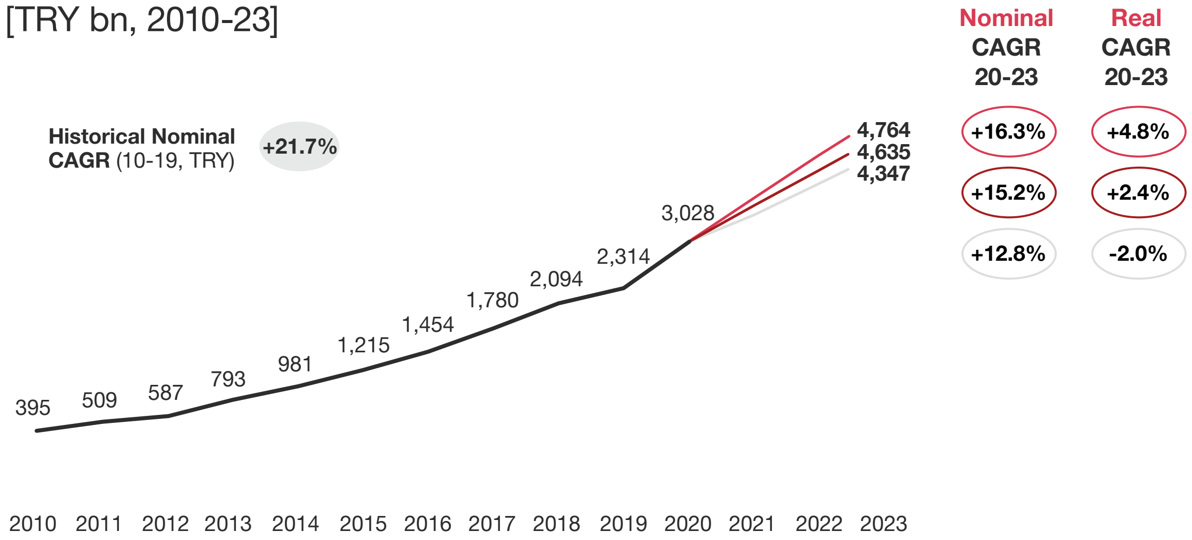
Historical — Macro Conservative — Macro Optimistic — Macro Base

Driven by nominal GDP growth based on our forecast model, Turkey's retail loans is expected to reach TRY 1,180-1,305 billion by 2023, with 11.4-15.3% per annum growth, lower than historic growth, and will constitute ~21.3% of total loan volume.

Source: BRSA, IMF, Turkstat, Strategy& analysis

Exhibit 18

Gross SME and Corporate loans volume expected growth [TRY bn, 2010-23]



% of Gross Loans Total (Base)

68.3%	68.4%	67.7%	69.4%	72.3%	74.7%	76.3%	77.3%	79.5%	79.0%	78.0%	**78.7%**	**78.6%**	**78.7%**

Historical — Macro Conservative — Macro Optimistic — Macro Base

Based on our regression analysis, there has been a strong correlation between nominal GDP (TRY billion) and SME and corporate TRY performing loan volume (TRY billion) for the past 10+ years. Furthermore, FX loans are assumed to grow in line with historical levels based on analyst views.

We expect SME and corporate gross loan volumes to continue growing at 12.8-16.3% p.a. through 2023. This is lower than the historical growth. Hence, SME and corporate loans are estimated to grow to TRY 4,347-4,764 billion by 2023, increasing their share of total loans to ~78.7%.

Source: BRSA, IMF, Turkstat, Strategy& analysis

Non-performing Loan Balance Expected Growth

The non-performing loan outstanding balance is influenced by four drivers:

- NPL inflows: loans that attained NPL status during the period (NPL inflows net of collections and asset write-offs, excluding sales);
- NPL collection: banks and non-bank financial institutions collecting or seizing assets from NPL customers during the period;
- NPL write-off: banks and non-bank financial institutions writing-off uncollectible NPLs in line with the local regulations during the period;
- NPL sales: bank and non-bank financial institutions selling part of their NPLs to AMCs during the period.

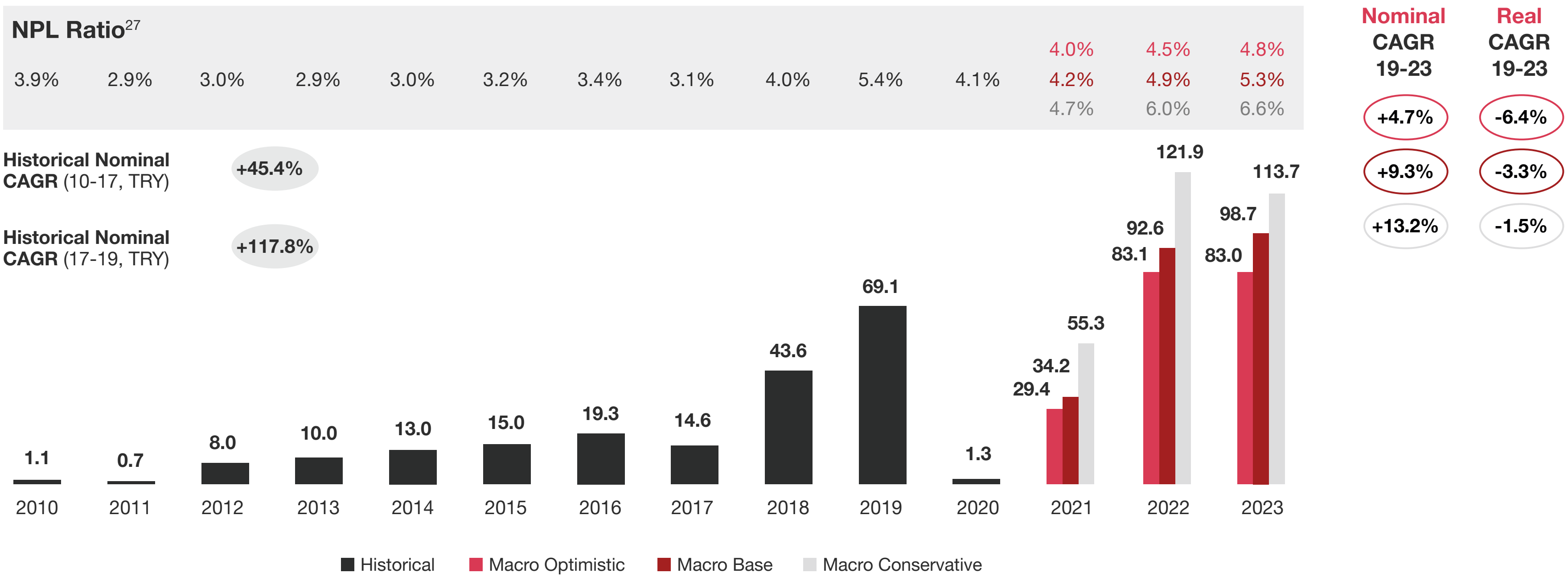
NPL outstanding balance (t) = NPL outstanding balance (t-1) + Net NPL Inflow (t) - NPL sales (t)

In order to estimate the NPL outstanding balance, we first forecasted "net NPL inflows" which is defined as NPL inflows net of collections and write-offs (excluding sales). Then, we calculated the upcoming year's NPL outstanding balance volume by adding net NPL inflow (upcoming year) to the NPL outstanding balance (previous year) and subtracting NPL sales (upcoming year).

In 2020, there has been a significant increase in Stage 1 and 2 loans due to the economic slowdown caused by COVID-19, subsequent COVID-19 financial support loans provided by the government and the limit increase of the Credit Guarantee Fund. However, these loans have not been classified as NPLs yet, in compliance with the forbearance measures. With the end of the forbearance measures in June 2021, it is highly expected that NPL volume on the pipeline will come back to life.

Exhibit 19

Net NPL Inflow Total Volume Expected Growth [TRY bn, 2010-23]



Historically, net NPL inflows have been driven by three macroeconomic indicators: real GDP growth (in reverse relation: i.e. net NPL inflow decreases as real GDP growth increases), FX rate (only for SME and corporate, i.e. the increase in FX rate leads to an increase in inflow) and unemployment (only for retail). We determined the expected value of net NPL inflow for each asset type and then derived the total.

The total net NPL inflow between 2021-2023 is expected to reach TRY 196-291 billion, a 4.7-13.2% p.a. growth. This leads to an NPL outstanding balance of TRY 293-363 billion in 2023 with 17.3-23.5% growth p.a. between 2019-2023. This is higher than the expected gross loan volume growth of 12.6-16.1% per annum. Thus, the NPL ratio is expected to increase to 4.8-6.6%.

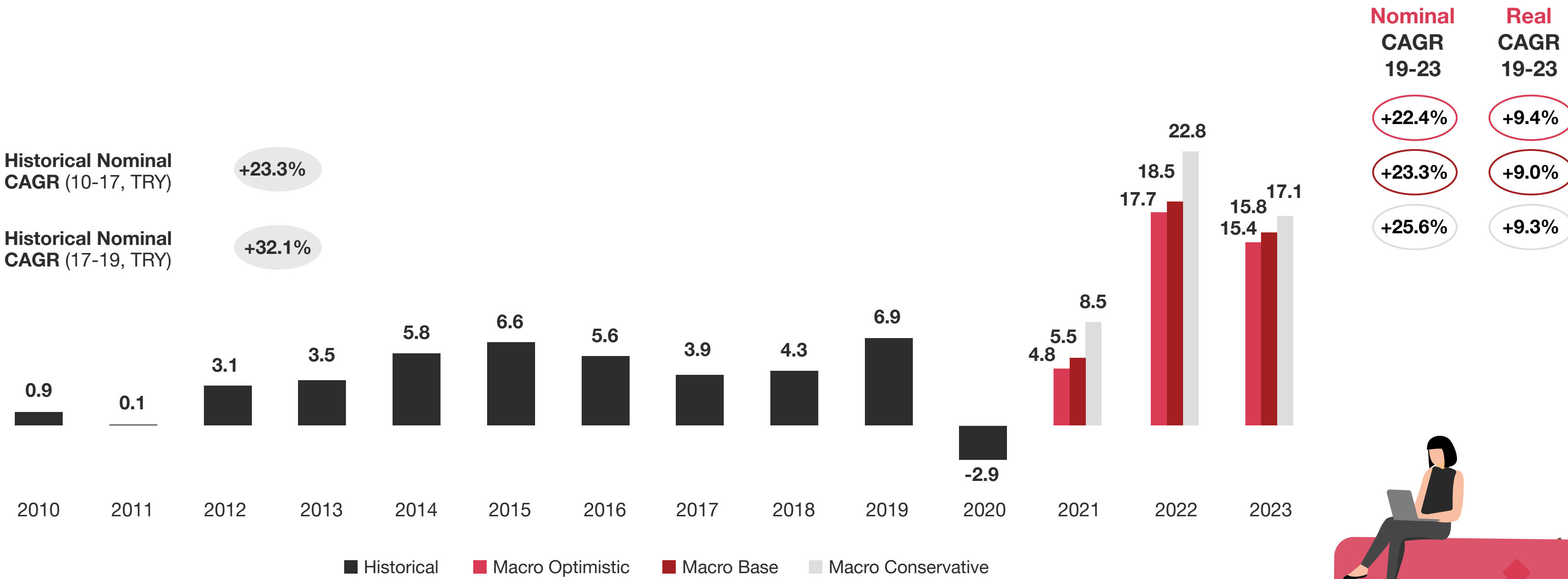
The sharp decline in 2020 and the limited growth in 2021 can be attributed to forbearance measures. These regulations which are expected to last until June 2021, coupled with the restructuring practices since 2017, will result in the delayed transformation of the accumulated Stage-2 loans into NPL, expected to be realised as an increased NPL inflow in 2022. This effect has been incorporated in our model when forecasting SME and corporate NPL inflows.

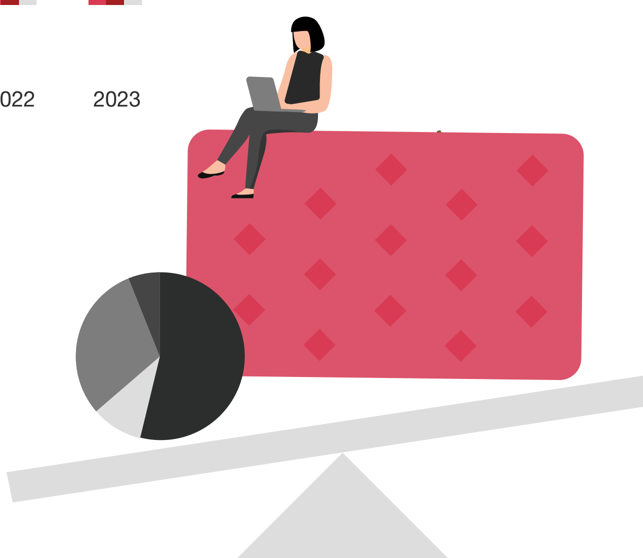
Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[27] Gross NPL Volume Outstanding Balance / Gross Loan Volume (Including banks & non-banks)

Exhibit 20

Net Retail NPL Inflow Volume Expected Growth [TRY bn, 2010-23]



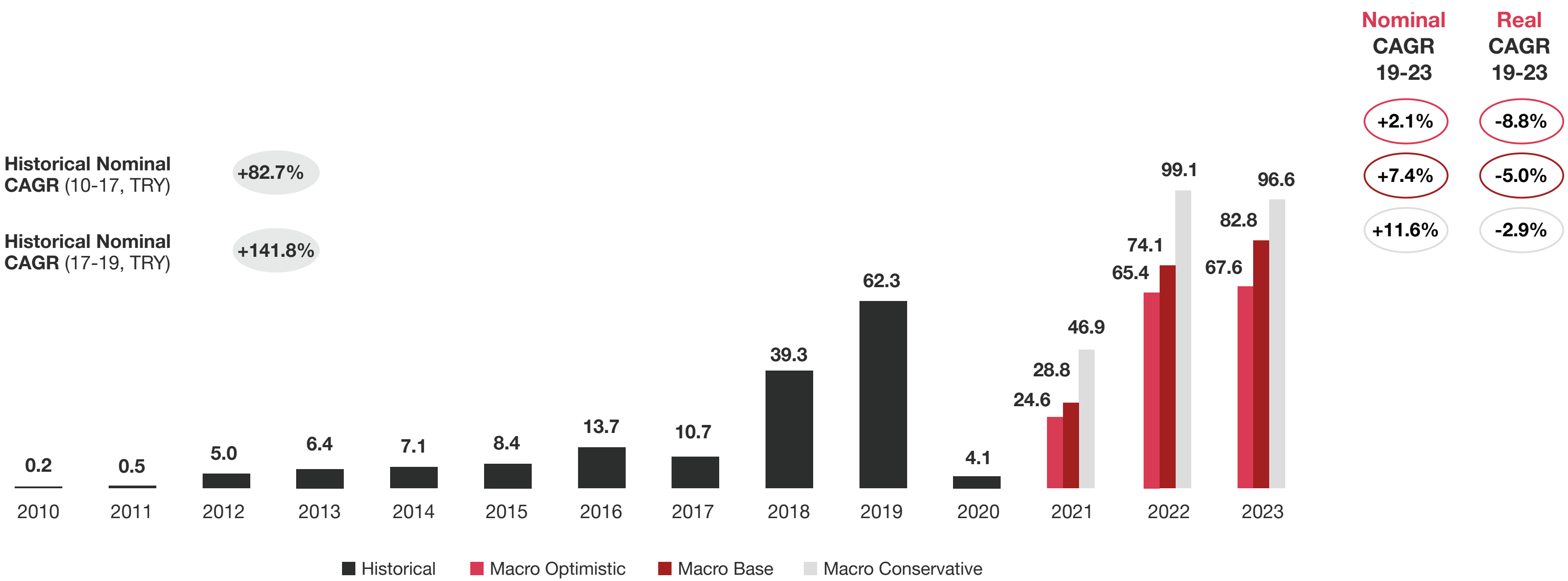


Based on real GDP growth and unemployment values in our three forecast scenarios, we estimate the gross retail NPL inflow to be TRY 38-48 billion in total between 2021-2023, growing at 22.4-25.6% p.a. The retail outstanding NPL balance is estimated to reach TRY 37-42 billion as of 2023 with 15.9-19.4% growth p.a. between 2019 and 2023.

Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, IMF, Turkstat, Strategy& analysis

Exhibit 21

Net SME and Corporate NPL inflow volume expected growth [TRY bn, 2010-23]



Based on our regression analysis, both the real GDP growth rate and FX rates affect SME and corporate NPL inflows. Net SME and corporate NPL inflow is expected to increase by 2.1-11.6% p.a. between 2019-23, which is below the SME and corporate gross loan growth levels in the same period (see Exhibit 18).

The sharp increase in 2018-19 was mainly due to the FX volatility and macroeconomic slowdown. The total net SME and corporate NPL inflow is expected to be between TRY 158-243 billion between 2021-2023. As a result, the gross SME and corporate outstanding NPL balance is expected to reach TRY 259-321 billion by 2023.

Additionally, loans granted by the government initiatives in 2020 (e.g., the incentivisation of loan disbursement of Economic Stability Shield) are expected to contribute to the NPL inflows in the following due to potentially lax underwriting practices.

If the forbearance measures are to be extended beyond June 2021, these assumptions would need to be revised.

Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, IMF, Turkstat, Strategy& analysis

Non-performing Loan Sales Expected Growth

We forecasted NPL sales by asset type based on historical trends. In all of our scenarios, we expect the following:

- For banks, SME and corporate NPL sales will grow faster than retail due to the loans given with the incentivisation of the Credit Guarantee Fund after 2017 and the Economic Stability Shield during the COVID-19-induced economic downturn, resulting in the accumulation of NPL in this segment.
- The Economic Reform Package of March 2021 (see Exhibit 28) incentivising asset quality improvement is expected to lead to a greater number of NPL sales in the banking sector and capacity enhancement in AMCs. These policies are expected to boost NPL sales upon their implementation.
- The forbearance measures will be suspended by June 2021.
- Estimated unrealised NPL sales in 2020 due to forbearance measures will be realised between 2021-2023.

Main assumptions behind our scenarios are the following:

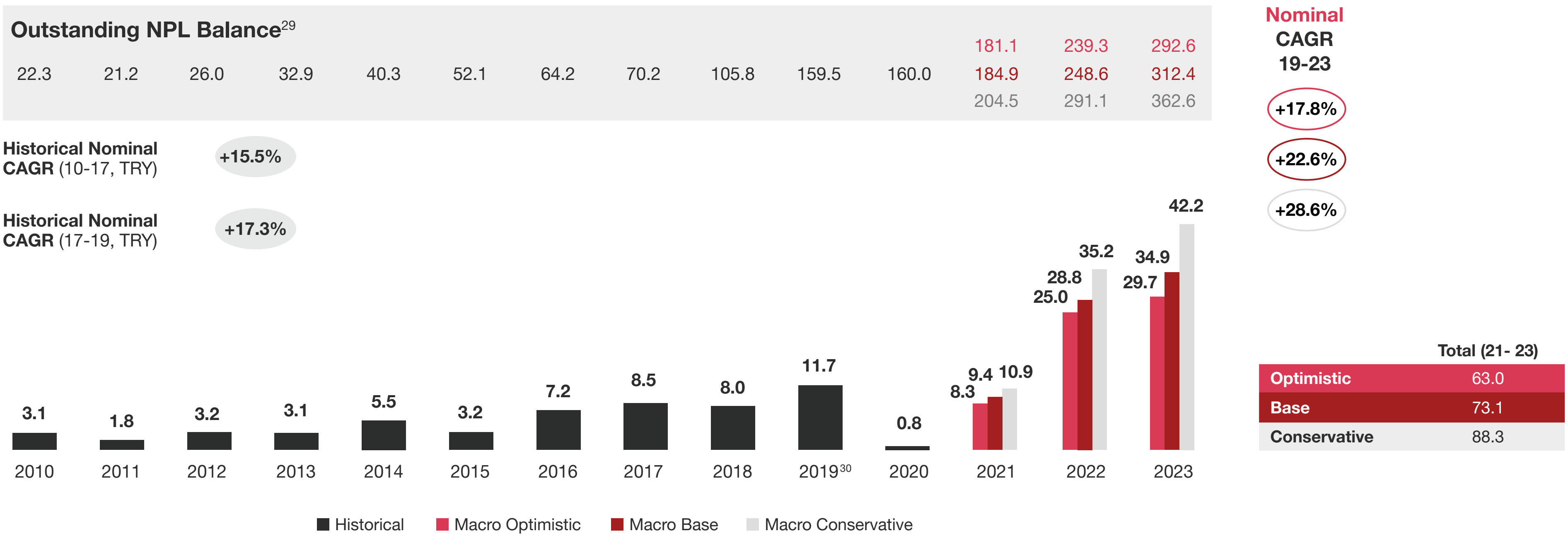
- In the macro-optimistic scenario, we expect relatively lower levels of NPL sales compared to our macro-base and macro-conservative scenarios. The reason behind lower NPL sales in this scenario is banks' reluctance to sell while experiencing higher recovery rates, lower NPL ratio and higher profitability.
- In the macro-base scenario, we envisage the sales ratio[28] to be similar to the historical average levels of NPL sales between 2010 and 2019.
- In the macro-conservative scenario, we expect that banks and non-bank FI will sell higher volumes compared to the base scenario due to financial institutions' willingness to sell NPL when they are experiencing lower capital adequacy. Furthermore, banks may be incentivized to sell NPL in the case of regulators' addressing asset quality issues. Hence, NPL sales ratios are expected to be above the historical average of 2010-2019.

Overall, in all scenarios with the incentivisation of NPL sales following the Economic Reform Package (March 2021) put forth by the government (see Exhibit 28), NPL sales are expected to increase which may, in turn, gradually decrease the NPL ratio.

[28] Sales ratios were calculated by taking ratio of NPL sales volume out of prior year's NPL stock and current year's net NPL inflow

Exhibit 22

NPL Sales Total Volume Expected Growth [TRY bn, 2010-23]



Since 2008, an NPL portfolio with a cumulative total of TRY 62.6 billion, in terms of UPB, has been sold. Historically, we observe that the upward trend in NPL sales, which occurred in most of the previous years, is disrupted with the year 2020 due to forbearance measures. We foresee that the total NPL sales volume is expected to reach TRY 30-42 billion by 2023, growing at 17.8-28.6% p.a.

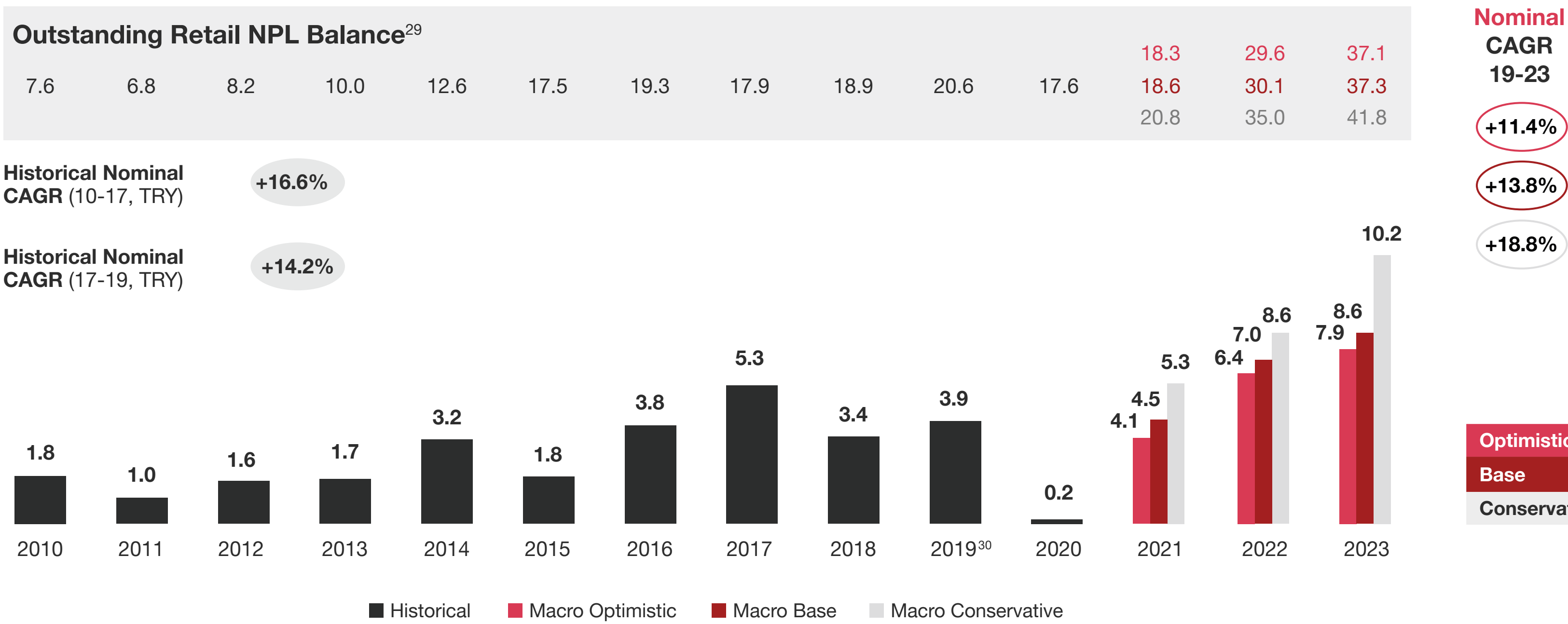
Anticipated growth of NPL sales will also be supported by the measures announced as part of the Economic Reform Package in March 2021. The measures that are aimed to improve the asset quality of the banking industry focus on:
i) providing the ability to establish a fund structure to enable domestic and international investors to invest in specific portfolios,
ii) the incentivisation of NPL sales especially for secured SME and corporate portfolios,
iii) securitization of NPLs and distressed loans and
iv) reinforcing the legal framework in which the AMCs operate.

Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[29] Outstanding NPL balance after sales
[30] Birleşim's one-off transaction in 2019 has been excluded

Exhibit 23

Retail NPL Sales Volume Expected Growth [TRY bn, 2010-23]



	Total (21- 23)
Optimistic	18.3
Base	20.1
Conservative	24.1

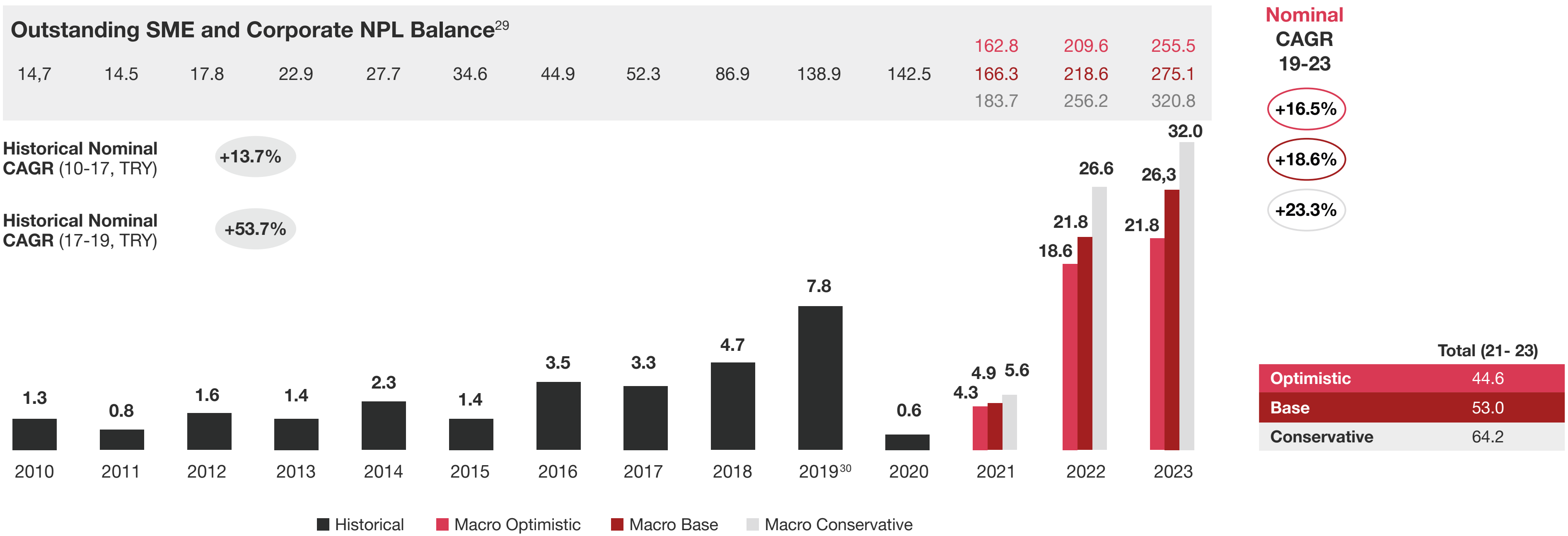
Similar to total sales volumes, retail NPL sales are expected to increase and reach TRY 8-10 billion by 2023, which represents 11.4-18.8% p.a. growth totalling TRY 18-24 billion in three years from 2021 to 2023.

Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[29] Outstanding NPL balance after sales
[30] Birleşim's one-off transaction in 2019 has been excluded

Exhibit 24

SME and Corporate NPL Sales Volume Expected Growth [TRY bn, 2010-23]



SME and corporate NPL sales are expected to reach TRY 22-31 billion by 2023, totalling to TRY 45-64 billion in three years, growing at 16.5-23.3% p.a., primarily driven by i) the increase of the SME and corporate NPL balance share within the gross NPL outstanding balance from 2020 to 2023; and ii) measures announced by the government in March 2021 as part of the Economic Reform Package (see Exhibit 28).

Source: BRSA, Audited annual financial statements and KAP (Public Disclosure Platform) disclosures of Banks, Leasing, Factoring, Financing and Asset Management Companies, Strategy& analysis

[29] Outstanding NPL balance after sales
[30] Birleşim's one-off transaction in 2019 has been excluded

Methodology and Assumptions

Exhibit 25

Scenario Descriptions

Scenario Type	Scenario Assumptions
Macro-optimistic scenario	• Vaccine implementation will be in line with the pre-announced calendar • More solid steps on investor friendly policies (rule of law, economic reforms, disinflationary policies) • European Union membership will become an anchor again • Investments will increase, particularly to lower import dependency • Above-mentioned assumptions will led TL assets to be charming that lead currency to be less exposed to shocks as result of portfolio inflows • Election campaigns raise demand, government expenditures & investments and inflation in 2023
Macro-base scenario	• Vaccine implementation will be partially in line with the pre-announced calendar • Tight monetary conditions will be continued that put downside pressure on the economic growth but government is expected to bolster loan growth as much as possible. With the basis effect, it will led higher GDP growth for 2021 • The relatively better services industry help employment to increase • Difficult to gain investor confidence again in the short-run • Election campaigns raise demand, government expenditures & investments and inflation in 2023
Macro-conservative scenario	• Vaccine implementation will be far behind the other EMs • Increase in political and geopolitical risks in 2021 • No progress of structural reforms • Early elections in the late 2021. • Economy team cannot sustain its market-friendly and efficient policies • Despite low demand, high currency depreciation keep inflation at high levels • Decline in investment growth for 2021 & 2022 compared to base case scenario which is expected increase after general + presidential elections • Investments, expenditures and market friendly policies led 2023 growth to be positive after elections

Exhibit 26

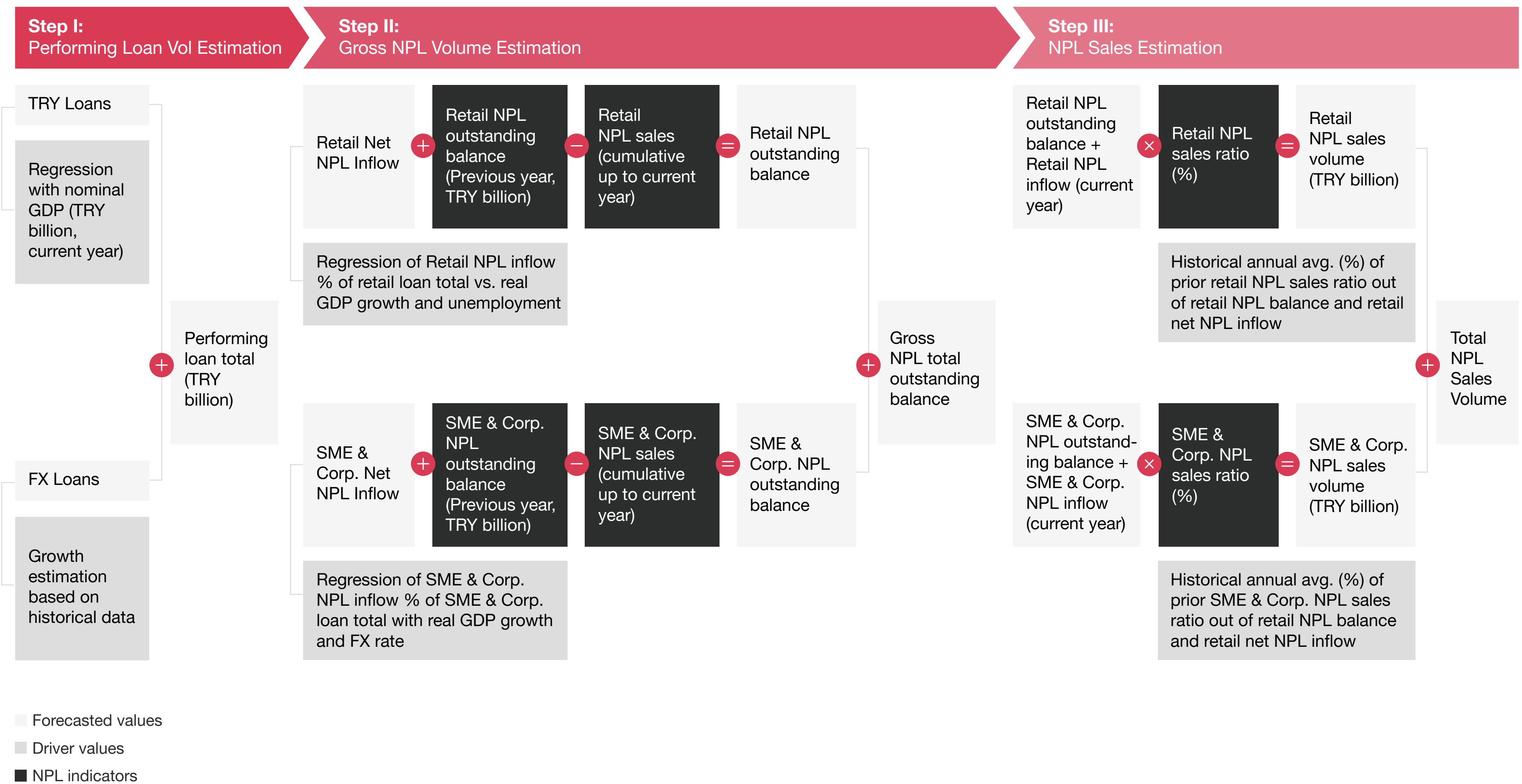
Macroeconomic Indicator Forecasts

Scenario Type	Indicators	2020 (Actual)	2021 (Forecast)	2022 (Forecast)	2023 (Forecast)
Macro-optimistic scenario	Real GDP Growth (%)		3.5%	4.5%	5.5%
	CPI (%)		12.4%	10.5%	10.1%
	Unemployment rate (%)		12.5%	12.2%	11.8%
	USD/TRY (Average)		8.0	8.5	9.0
Macro-base scenario	Real GDP Growth (%)	1.8%	3.0%	3.5%	4.0%
	CPI (%)	14.6%	13.9%	12.4%	11.5%
	Unemployment rate (%)	13.2%	13.9%	13.0%	11.9%
	USD/TRY (Average)	7.0	8.5	9.0	9.3
Macro-conservative scenario	Real GDP Growth (%)		-1.0%	2.0%	3.5%
	CPI (%)		18.7%	14.3%	12.3%
	Unemployment rate (%)		14.3%	13.7%	12.6%
	USD/TRY (Average)		9.5	10.0	10.7

Source: Strategy& analysis

Exhibit 27

Forecast Methodology



Source: Strategy& analysis

Economic Reform Package

Exhibit 28

Economic Reform Package - Sections 3.1 and 3.2

The Economic Reform Package announced by the Turkish government (March 12, 2020) has solid implications regarding problematic loans and the AMCs.

Under the section related to the planned increase in the asset quality of the banking sector, it is stated that; (i) necessary incentives and precautionary mechanisms will be established to remove NPLs from the balance sheet through methods such as sales to AMCs and deletion from assets, (ii) the loans in the close monitoring and non-performing loans group will be transferred off-balance sheet by making a legislative amendment for securitization, (iii) the Loan Lifecycle Project (Kredi Yaşam Döngüsü Projesi) will be implemented, (iv) operational restructuring and firm rehabilitation functions will be established in the banking sector for loans under close monitoring (Stage-2 loans), (v) Efforts will be made to establish Venture Capital Investment Funds for the rehabilitation of those who have the potential to generate added value and create employment among problem loans.

Under the section related to the capacity-strengthening of AMCs, it is stated that (i) legal infrastructure will be created for AMCs to operate in a stronger structure; (ii) in order to create a competitive and institutional structure in the sector, the exemption of stamp duties, fees and Resource Utilization Support Fund deduction granted to AMCs for five years will be made indefinite; and (iii) AMCs will be able to become a member of the Association of Financial Institutions.

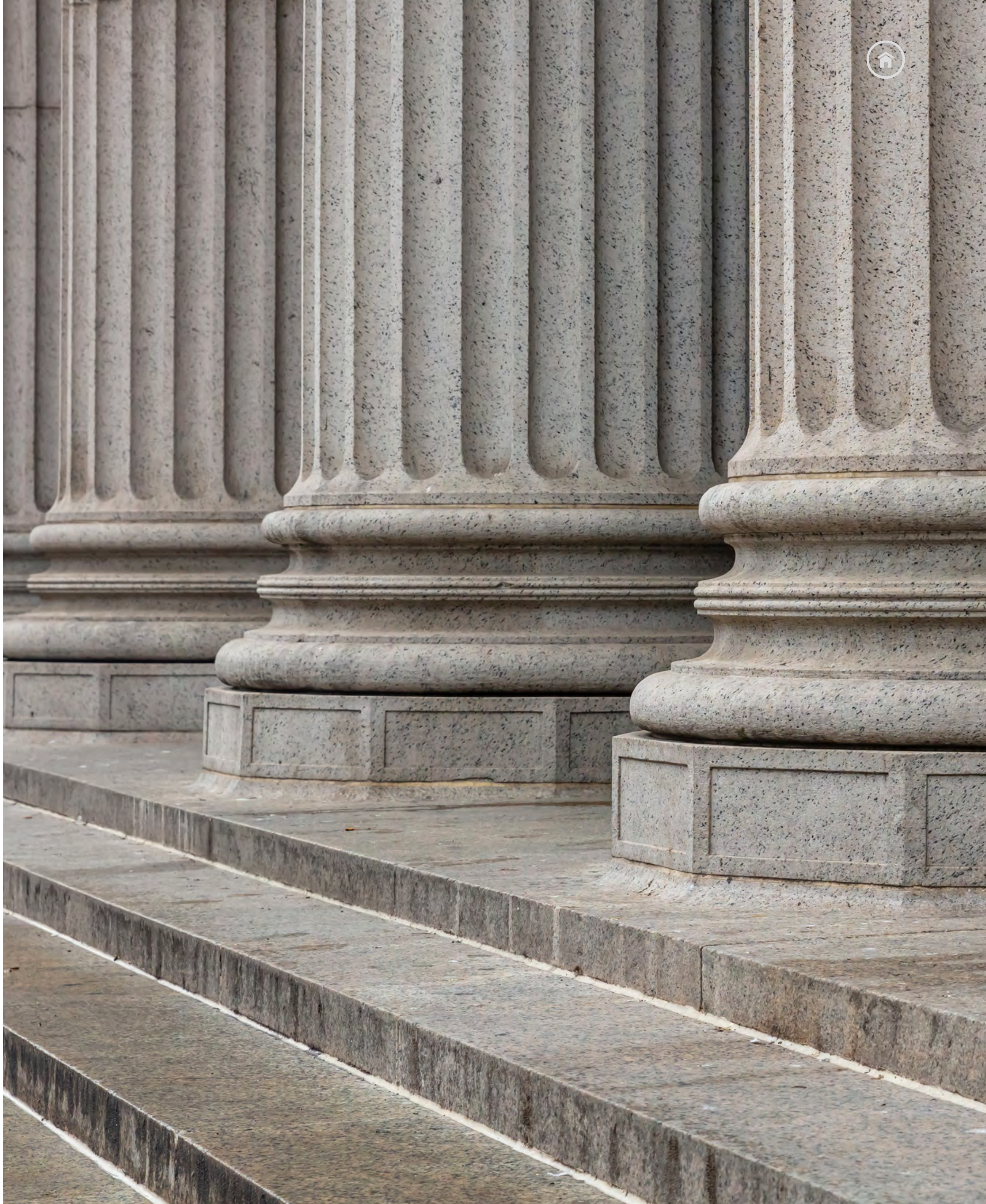


Exhibit 29

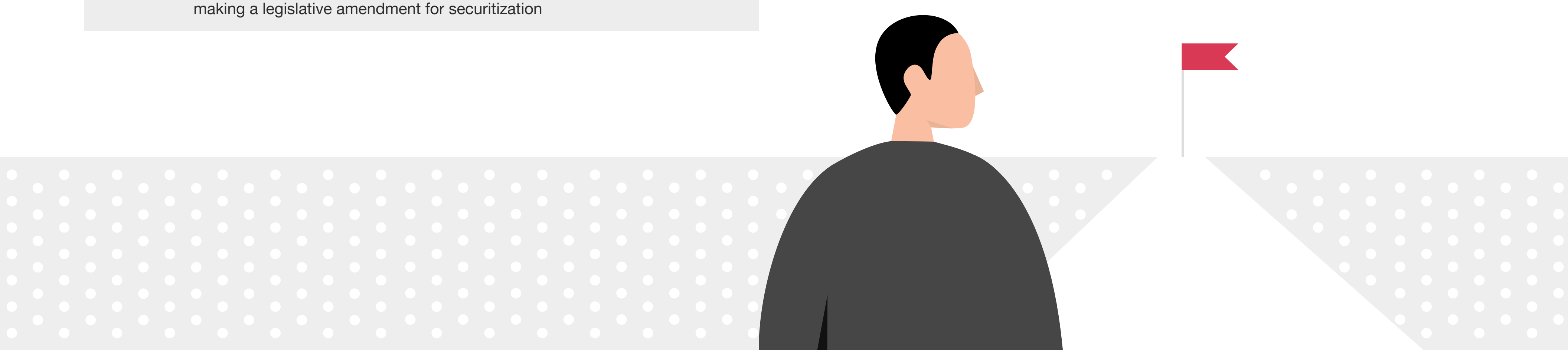
Economic Reform Package Action Plan - Sections 3.1 and 3.2

3.1. Asset quality of the banking sector will be increased

#	Activity	Completion Date
3.1.a	Implementation of the Credit Lifecycle Project	30.09.2021
3.1.b.	Operational restructuring and firm rehabilitation functions will be established in the banking sector for loans under close monitoring (Stage-2 loans)	30.09.2021
3.1.c.	Efforts will be made to establish Venture Capital Investment Funds for the rehabilitation of those companies with problem loans that have the potential to generate added value and create employment	31.12.2021
3.1.d.	Necessary incentives and precautionary mechanisms will be established to remove NPLs from the balance sheet through methods such as sales to AMCs and write-off from assets	31.12.2021
3.1.e.	The loans in the close monitoring and non-performing loans group will be transferred off-balance sheet by making a legislative amendment for securitization	30.09.2021

3.2. AMC capacity will be strengthened

#	Activity	Completion Date
3.2.a.	Legal infrastructure will be created for AMCs to operate in a stronger structure	31.12.2021
3.2.b.	In order to create a competitive and institutional structure in the sector, the exemption of stamp duties, fees and Resource Utilization Support Fund deduction granted to AMCs for five years will be made indefinite	31.12.2021
3.2.c.	AMCs will be able to become members of the Association of Financial Institutions	Completed



Abbreviations

AMC	Asset Management Company
BAT	The Banks Association of Turkey ("TBB" in Turkish)
BRSA	Banking Regulation and Supervision Agency of Turkey ("BDDK" in Turkish)
CBRT	Central Bank of the Republic of Turkey ("TCMB" in Turkish)
CGF	Credit Guarantee Fund ("KGF" in Turkish)
ECB	European Central Bank
IFRS 9	International Financial Reporting Standard, promulgated by the International Accounting Standards Board
KAP	Public Disclosure Platform of Turkey (where capital markets and Istanbul Stock Exchange announcements are publicly disclosed)
NPL	Non-performing loans
SDIF	Savings Deposit Insurance Fund ("TMSF" in Turkish)
Turkstat	Turkish Statistical Institute
UPB	Unpaid principal balance

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2021-0143