Economic Insight

Turkey: Hard landing on the horizon

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Executive Summary

- Turkey's currency crisis became full-fledged in August amid an ongoing withdrawal of global liquidity stemming from continued monetary tightening in the U.S. as well as lasting economic policy mistakes. In particular, the Central Bank of the Republic of Turkey (CBRT) did not raise interest rates in late July despite surging inflation, which called its independence again into doubt; and a political feud with the U.S. culminated in the latter imposing sanctions on Turkey.
- In September, the CBRT hiked its key policy interest rate by 625bp to 24%. We have concluded that the hike and its magnitude were necessary to calm financial markets and also sufficient to keep future inflation expectations in check. Turkish assets have stabilized since the rate hike. Moreover, the expected appreciation of the US dollar vs. the Turkish lira (as a proxy for expected inflation) was close to 24% in the four weeks prior to the rate hike. Hence, the new benchmark lending rate more or less matches the rate of interest that an investor in TRY-denominated short-term deposits or long-term bonds should demand.
- Additional fiscal tightening is needed to stabilize the economy in the medium term. The Turkish government's *New Economy Program 2019-2021* heads in the right direction by focusing on a rebalancing of the economy. However, Turkey has a history of reform slippage and deviations from economic programs.
- A technical recession (two to three quarters of negative growth in H2 2018 and H1 2019) is expected, resulting in full-year growth of just +0.4% in 2019.
- Corporate sector debt is the key risk in Turkey. It was equivalent to 65% of GDP in Q1 2018, of which about 56% was denominated in foreign currencies. Hence, rolling over that FX-denominated debt will be challenging amidst the current global liquidity tightening, especially in a hard landing scenario.
- The Turkish lira is forecast to depreciate by an average -40% against the US dollar in 2018 and by another -37% in 2019.

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Evolution of a textbook BoP crisis

Turkey, along with Argentina, has been increasingly in the focus since the beginning of 2018 as financial markets began to sanction the most vulnerable emerging markets (EM) amid an ongoing withdrawal of global liquidity, which has been mainly a result of continued monetary tightening in the U.S. The reasons for Turkey's high vulnerability were manifold, including:

- Lasting economic policy mistakes, namely strong pro-cyclical fiscal policy since H2 2016 combined with overly loose monetary policy (negative real interest rates).
- A subsequent overheating of the economy, reflected in rapid GDP growth (+7.4% in 2017, +7.3% y/y in Q1 2018), along with rising macroeconomic imbalances.
- Credit growth surged to over +20% y/y.
- CPI inflation, core inflation, as well as wage growth moved well into double digits.
- Crucially, the persistently large current account deficit, Turkey's long-standing Achilles' heel, widened further while the financing of the shortfall (capital inflows) weakened.
- Short-term debt obligations rose rapidly and exceeded official foreign exchange (FX) reserves more than twice since end-2017.

In May 2018, Turkey faced a first strong storm as fading investor confidence resulted in a considerable sell-off of the Turkish lira (TRY, -10% vs. the USD during the month) triggered by a range of weak data and increased concerns about the independence of the Central Bank of the Republic of Turkey (CBRT) especially with regard to monetary policy. Only a 300bp hike of the late liquidity window lending rate (at the time the effective policy rate) in an emergency meeting of the CBRT could stabilize the currency temporarily, though daily volatility remained high.

In August 2018, the currency crisis became a full-blown balance-of-payments (BoP) crisis. Markets lost their confidence in Turkey entirely after (i) the CBRT did not raise interest rates in late July despite surging inflation; and (ii) a political feud between Turkey and the U.S. escalated, culminating in U.S. sanctions against Turkey at the start of August. The TRY plunged by -14% vs. the USD in one day on August 10th and lost -24% during the month as a whole. Pressures on the TRY remained high, despite some measures taken by the CBRT to provide sufficient liquidity to the banking sector.

625bp policy rate hike in September – was it enough?

On September 13, the CBRT finally hiked its benchmark lending rate, the one-week repo rate, by 625bp from 17.75% to 24%. Since the CBRT's previous hikes – from 8% to 16.5% on June 1 and from there to 17.75% one week later – already

three months had passed.[1] In the meantime, the TRY had depreciated by about -30% against the USD, the yield on 10-year TRY-denominated Government bond had spiked by 435bp from 13.85% to 18.19%, while CPI inflation had accelerated from 12% to close to 18%. By mid-August, as shown in the table below, Turkish assets had experienced an even more acute level of stress.

	May 31	Aug. 13	Sept. 13
TRY per USD	4.4848	6.8860	6.3623
10-year TRY Government bond	13.85%	21.53%	18.19%

Interestingly, only a few days before its latest decision, there were widespread expectations that the CBRT would not move at all, as President Erdogan had long made public his somewhat unorthodox views on the link between interest rates and inflation. And, should the CBRT nevertheless be bold enough to hike interest rates, no more than an increase of 300-400bp seemed likely. Against that background, how should the CBRT's latest move be judged? Was it too little, too late? Or was it more or less properly calibrated? In our view, it was high time for the CBRT to hike its benchmark lending rate and its decision was remarkably well calibrated.

This view is confirmed by the markets' response. Turkish assets had started to stabilize before September 13, and they have continued to do so since then, which is encouraging. However, fundamentals matter, too.

As CPI inflation has further accelerated to 24.5% y/y in September and is likely to remain above 20% for some time owing to the TRY's past depreciation, the question is if, at 24%, the CBRT's benchmark lending rate is now sufficient to provide a cushion and keep inflation expectations in check. In this respect, two things are worth keeping in mind. First, at the producers' level, inflation is already running at 46% y/y. Second, in Turkey like in many other developing economies, measuring inflation is easier said than done. For this reason, variations in the external value of the domestic currency against "hard" currencies are often perceived to be the best proxy for "real" inflation, the expected appreciation of foreign "hard" currencies being therefore the best proxy for expected inflation.

In other words, an investor in TRY-denominated short-term deposits or long-term bonds should demand a rate of interest that more or less matches the expected appreciation of the USD against the TRY. How can we measure this expectation?

We have modeled expectations by using an algorithm known as the Allais transformation or Allais filter. It conveyed that the expected appreciation of the USD was on average 23.88% between mid-August and mid-September, a number surprisingly close to 24%, the level at which the CBRT set its benchmark lending rate on September 14 (see the Box at the end for details on the Allais transformation). Knowingly or not, the CBRT has set its policy rate remarkably close to this expectation. By doing so, the CBRT has signaled to domestic and foreign lenders that it cares about them, without overdoing it. This properly calibrated decision was

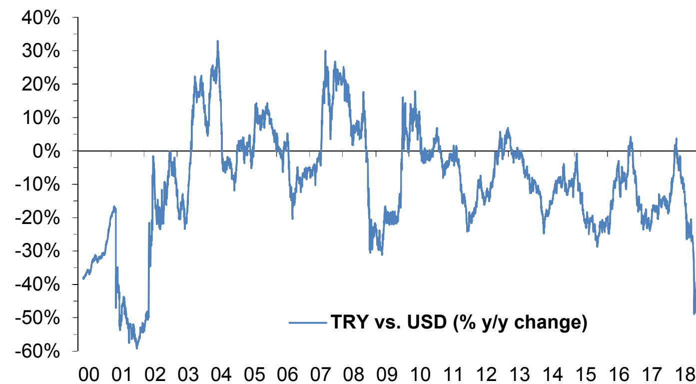
[1] The size of the 850bp hike on June 1 is somewhat misleading. From November 2017 to end-May 2018, the CBRT provided liquidity to the banking sector entirely through its late liquidity window lending rate (which thus was the effective policy rate), which was raised by 300bp to 16.5% on May 23. Then, on June 1, the one-week repo rate became again the effective policy rate and was set equal to the then current funding rate (16.5%) of the CBRT.

necessary; it will contribute to rebalancing savings and investment in the private sector; subject to complementary measures to be described below, it should pave the way to a sustainable stabilization of the Turkish economy.[2]

More is needed to restore lasting investor confidence

Trading at around 6.00 vs. the USD in the first half of October, the TRY has lost about -40% of its value compared to a year ago. This is the highest annual loss since April 2001 at the height of Turkey's previous full-blown financial crisis (see Figure 1).

Figure 1: Exchange rate TRY vs. USD (% y/y change)



Source: IHS Markit, Allianz Research

The lesson from previous BoP crises in EM is that both monetary and fiscal policies need to be tightened decisively, preferably backed by an IMF funding program. While the monetary policy measures taken in September have stabilized financial markets in the short term, they will most likely not be enough to turn the economy entirely. Additional decisive fiscal tightening will be needed, at least. Moreover, current investor concerns would be mitigated by a political reconciliation of Turkey with its traditional allies in the West and an unambiguous re-establishment of central bank independence.

In terms of fiscal policy, the government's New Economy Program 2019-2021 (NEP; successor of the previously called Medium Term Programs), released on September 20, 2018, heads in the right direction by focusing on a rebalancing of the economy instead of mainly boosting growth as the previous programs did. It envisages "strong fiscal discipline" and targets annual fiscal deficits of just below -2% of GDP in the next three years. The announced policies and measures include:

[2] At the end of September, the perceived rate of dollar appreciation was 19.5% and the perceived rate of inflation was "only" 11.8% (up by +200bp since the beginning of the year). This reinforces our argument that the exchange rate is more relevant than the CPI to measure *expected* inflation. And it indicates that the CBRT's policy rate has remained above *expected* inflation despite the surge in the CPI in September.

- increasing savings and revenues
- suspending investment projects for which the tender process has not been finalized yet
- shifting to more efficient, financially sound PPPs
- revising the social insurance scheme
- removing "non-effective" tax exemptions and rebates.

If successfully implemented, these measures could indeed facilitate some of the necessary fiscal tightening and further support the way to a lasting stabilization of the economy.

However, before getting too euphoric, it is important to note that Turkey has a history of fiscal reform slippage under IMF programs – and this time there most likely will not even be IMF support. Moreover, the NEP 2019-2021 is based on real GDP growth forecasts of +2.3% in 2019 and +3.5% in 2020. Euler Hermes expects much lower growth in 2019, which would result in larger fiscal deficit to GDP ratios than targeted in the NEP. All in all, the fiscal targets set for the next two years may be missed, either because of reform slippage or due to lower than expected revenues, or both. This could result in a renewed loss of investor confidence, which in turn would require further policy tightening.

Hard landing in 2019?

A series of economic data releases over the past two weeks have shown how Turkey's currency crisis is beginning to impact the macroeconomic outlook. September saw a collapse in several surveys of business and consumer sentiment, highlighting the potential for a sharp slowdown in business investment and consumer spending in Q4. In particular:

- The Manufacturing PMI calculated by the Istanbul Chamber of Industry and IHS Markit dropped to 42.7 points in September, the lowest level since March 2009 and below the 50.0 no-change mark for the sixth consecutive month. Both output and new orders continued to weaken.
- The overall Economic Confidence Index determined by TurkStat fell to 71.0 in September, the lowest level since March 2009. Its five sub-indexes also fell to multi-year lows:
  - The Real Sector Confidence Index (business sentiment in manufacturing) fell to 90.4, its lowest level since April 2009.
  - The Services Sector Confidence Index fell to 79.4, the lowest level since records began in 2011.
  - Construction Sector Confidence dropped to 57.3, the lowest level since records began in 2011.
  - Retail Trade Confidence fell to 88.5, the lowest level since records began in 2011.
  - Consumer Confidence dropped to 59.3, its lowest since September 2015 (and second lowest since January 2009).

All in all, despite the large interest rate hike in September, we believe it will get worse in the near term (higher inflation, credit crunch, sharp growth slowdown) before it gets better for the Turkish economy. As a result, our baseline scenario is now a hard landing of the economy (we assign a 70% probability to this), with at

least three quarters of negative growth in H2 2018 and H1 2019 (i.e. a technical recession). We forecast real GDP growth to slow sharply to +0.4% in 2019 as a whole, after +3.3% in 2018.

Consumer price inflation surged to 24.5% y/y in September and should exceed 20% in the next months before gradually retreating, resulting in average price growth of more than 16% in 2018 and 18% in 2019. Lower growth and the weakened currency will trigger higher fiscal deficits – we forecast more than -3% of GDP this year and next – and rising public and external debt in relation to GDP.

At the same time, there should be a sharp rebalancing in the tradeable sector, as imports of goods collapsed by -22.7% y/y in August. Exports of goods fell by a much lower rate of -6.5% y/y and should, going forward, benefit from the more competitive currency. Furthermore, exports of services should benefit from rising tourism as tourists will enjoy significantly more affordable holidays in Turkey. We forecast that the current account deficit will eventually narrow to -2.5% of GDP or so in 2019 (see Figure 2 for more details on our forecasts).

Figure 2: Turkey – crisis scenarios

			Soft Landing scenario (30%)		Hard Landing scenario (70%)	
Key forecasts	**2016**	**2017**	**2018f**	**2019f**	**2018f**	**2019f**
GDP growth (%)	**3.2**	**7.4**	**3.8**	**2.7**	**3.3**	**0.4**
Inflation (%, aop)	**7.8**	**11.1**	**16.1**	**15.0**	**16.4**	**18.0**
Fiscal balance (% of GDP)	**-2.3**	**-2.3**	**-3.4**	**-3.2**	**-3.4**	**-3.1**
Public debt (% of GDP)	**28.3**	**28.5**	**31.7**	**29.1**	**33.0**	**31.3**
Current account (% of GDP)	**-3.8**	**-5.5**	**-6.0**	**-4.0**	**-5.5**	**-2.5**
External debt (% of GDP)	**47.3**	**53.4**	**60.1**	**54.3**	**61.5**	**63.3**
TRY per USD (aop)	**3.02**	**3.65**	**5.00**	**6.00**	**5.10**	**7.00**
TRY per USD (aop, % change)	-11.0	-20.8	-37.1	-20.0	-39.8	-37.3

NB: The "Soft Landing scenario" assumes that appropriate policy measures are taken in Q4 2018, resulting in 2 quarters of negative GDP growth. The "Hard Landing scenario" assumes appropriate policy measures are taken in Q1 2019, resulting in 3 quarters of negative GDP growth.

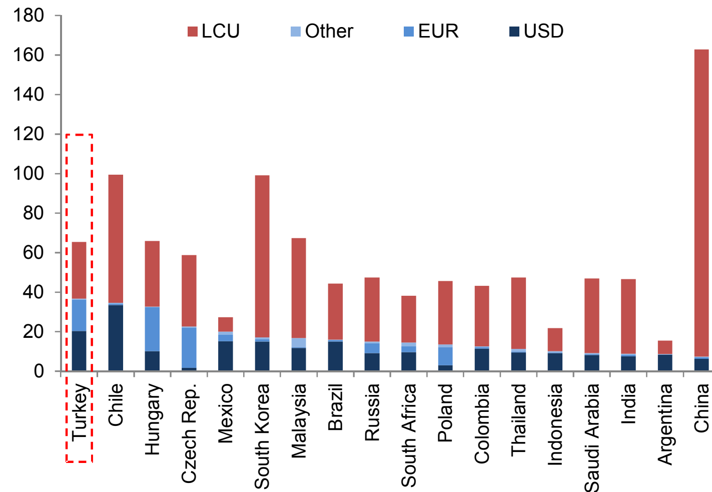
Sources: National statistics, IMF, IHS Markit, Allianz Research forecasts

The corporate sector will face rising insolvencies and corporate debt defaults, most likely intensified by a range of FX controls that were announced in September[3]. The non-financial corporates' (NFC) debt burden in Turkey has continued to rise and stood at 65% of GDP in Q1 2018, a 25pp increase since end-2010. About 56% of that debt is FX-denominated, the second highest share among major EM. And at 37% in relation to GDP, FX-denominated debt of NFC is the highest in Turkey among EM (see Figure 3). Anecdotal evidence suggests that many Turkish

[3] The Turkish government announced a number of FX controls in September, the impact of which is doubtful, however. On September 4, a decree imposing FX controls on exporters went into effect. Exporters must now convert 80% of their FX revenue into TRY within 180 days of receiving payment. The measure will last six months. This requirement could especially cause losses for exporters who source raw materials or investment goods abroad or have FX loans. And on September 13, President Erdogan issued a decree curtailing the use of foreign currencies in domestic transactions. Contracts will have to be converted to TRY within 30 days. Details (and potential exemptions) have to be revealed yet, but the decree will adversely affect thousands of companies whose contracts are currently priced in USD or EUR, including many of the government's contracts, e.g. in construction activities. In particular companies which have large-scale FX-denominated debt and whose business is predominantly domestic will face severe difficulties.

companies have hedged FX exposure, but at the latest rate of currency depreciation, most of them are unlikely to be fully hedged now. Hence, rolling over that FX-denominated debt will be challenging amidst the current global liquidity tightening, especially in our hard landing scenario.

Figure 3: Turkey vs. other EM – Currency breakdown of NFC debt (% of GDP), Q1 2018



Sources: National statistics, IIF, Allianz Research

Box: Allais transformation to model expected exchange rate appreciation

In an uncertain world, it seems reasonable to assume that expectations are very much derived from past experience. A classic way of representing such a psychological process posits that the value expected at time n equals the value expected at time $n-1$ plus a constant fraction k of the latest surprise (or forecast error):

$$y_n = y_{n-1} + k(x_n - y_{n-1}) \quad 0 < k < 1$$

where the variable x represents the phenomenon of interest, namely the daily (or weekly, or monthly) rate of appreciation of the USD against the TRY.

This classic way of modelling expectations is easy to use, but it has one serious shortcoming: why should k be constant? If k is set close to 0, "expectations" are assumed to be inelastic, people are assumed to learn slowly from experience and to have a long memory. This may be a correct assumption in a stable environment, but not in a rapidly changing situation like the one experienced in Turkey. Therefore, an enhanced way of modelling expectations (known as the Allais transformation or Allais filter) assumes that k is context-dependent, i.e. is a non-linear increasing function of y_{n-1}, liable to vary between 0 and 1

$$y_n = y_{n-1} + k(y_{n-1})(x_n - y_{n-1}) \quad 0 < k(y_{n-1}) < 1$$

For lack of space and for the sake of brevity, it will suffice to report in the table below how, according to this algorithm, the expected annual appreciation of

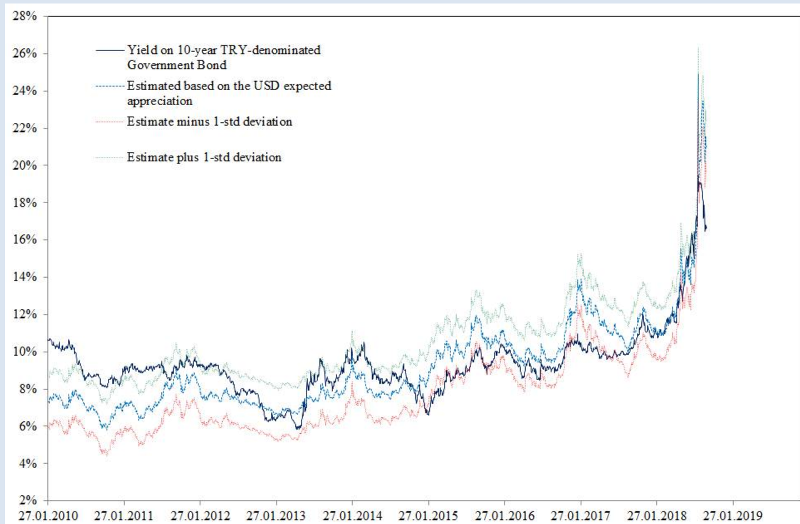
the USD against the TRY and its elasticity have varied during the period under review.

At annual rate	May 31	Aug. 13	Sept. 13
Elasticity (k)	0.1925	0.3000	0.2700
Expected appreciation (y)	14.43%	28.01%	23.90%

The critical information that such an algorithm conveyed between mid-August and mid-September was that the expected appreciation of the USD was on average 23.88% (maximum: 28.01%, mini-mum: 21.13%), a number surprisingly close to 24%, the level at which the CBRT set its benchmark lending rate on September 14th.

One caveat is that the expected appreciation of the USD against the TRY varies daily, while the one-week repo rate varies more discretely. That said, over a long period starting in 2010, there has been a strong and stable correlation between the expected appreciation of the USD against the TRY and the yield on TRY-denominated 10-year Turkish Government bond, which – unlike the bench-mark lending rate – varies daily, too (see Figure 4). Furthermore, this type of correlation also exists, at least to some degree, in other developing economies.

Figure 4: Expected appreciation of the USD vs. the TRY and yield on TRY-denominated 10-year Turkish Government Bond



Source: Allianz Research

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