

Turkey's macroeconomic policy challenges in the aftermath of the 2018 crisis: A sectoral financial balances analysis

Sashi SIVRAMKRISHNA

Kautilya Entrepreneurship & Management Institute & Foundation to Aid Industrial Recovery,
Bengaluru, India
sashi.sivramkrishna@gmail.com

Dhruva Teja NANDIPATI

Narsee Monjee Institute of Management Studies, Bengaluru, India
ndhruvateja@gmail.com

Abstract. *In August 2018, Turkey experienced a major economic crisis when its exchange rate depreciated by around 40 percent in the course of just a few days. This led to a credit bust that soon dragged Turkey into a recession. This paper analysis Turkey's predicament using the stock-flow consistent sectoral financial balances (SFB) model to delineate and evaluate the policy options open to Turkey at a juncture where the private sector has commenced a process of deleveraging or in other words, reducing its net financial accumulation of liabilities. Since the crisis erupted, Turkey has tightened both monetary and fiscal policies to control accelerating inflation and the depreciating lira, which would then – it is hoped – revive investment and exports. However, prevailing uncertainties on account of deteriorating Turkish-US relations may prove a dampener on the success of these policies.*

Keywords: sectoral financial balances, Turkey, currency crisis, credit leveraging, deleveraging.

JEL Classification: E390, E650, E660, F310, F320.

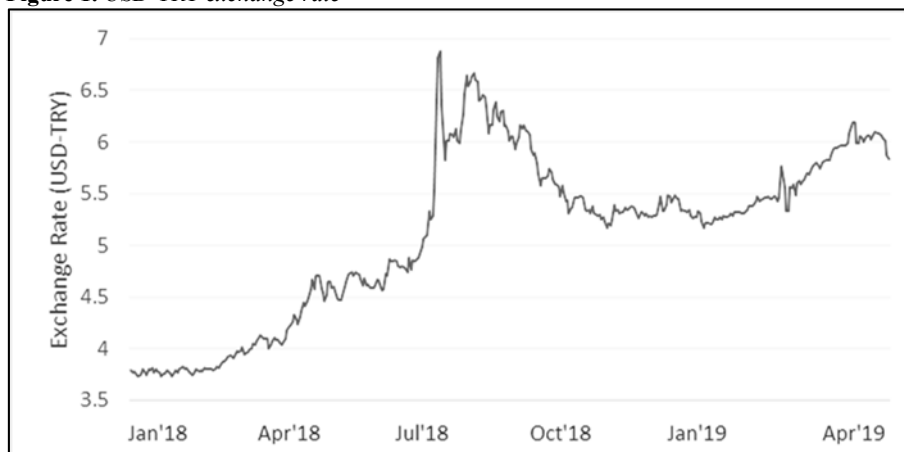
1. Introduction

Turkey, the seventeenth largest economy in the world, has been able to achieve spectacular growth rates in real GDP over the last two decades, doubling its per capita income, which now stands close to US\$15,000 or US\$27,500 in PPP terms. At the same time, Turkey has experienced periodical crisis in the 21st century; the dotcom burst of 2001, the global financial crisis (GFC) of 2008 and more recently, a currency crisis in 2018. What are the macroeconomic policy challenges that Turkey faces from the recent 2018 crisis with a depreciating currency that could disrupt its growth trajectory? Meanwhile, the strained political relations with the US and trade wars unleashed by President Trump may also pose serious macroeconomic implications for Turkey. This paper attempts to study the crisis from a Post-Keynesian perspective, in particular, the Sectoral Financial Balances (SFB) model to explore the impacts of these shocks on and policy challenges to ensure sustainability of Turkey's high GDP growth.

2. The Turkish crisis of 2018

2018 was a turbulent year for Turkey. The growing hostility with the US over the Syrian crisis, the dispute over the release of Pastor Andrew Brunson who had been detained by Turkey on terrorism charges and the decision of President Donald Trump to double tariffs on imports of steel and aluminum from Turkey sent the Turkish lira (official code TRY) into free fall. Between August 3 and the August 13, 2018, the lira fell by some 40 percent to an all-time low of 6.9 lira/\$. As seen in Figure 1, although the lira has made a partial recovery since then, it still remains significantly depreciated as compared to its rate before the crisis began.

Figure 1. USD-TRY exchange rate

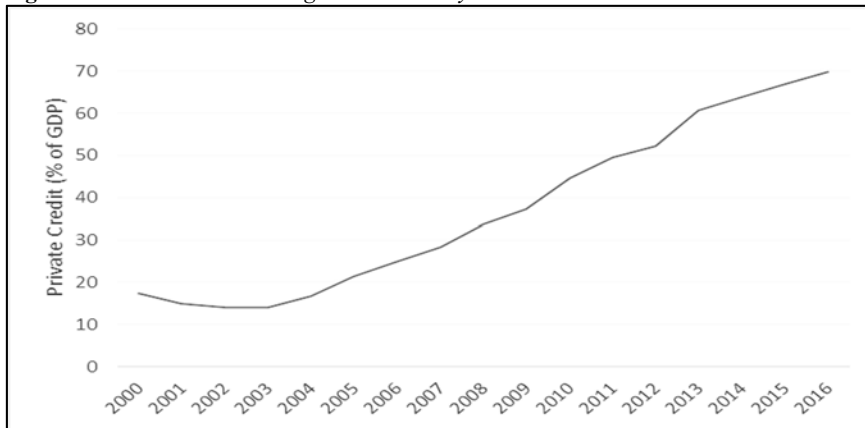


Source: available at <https://tradingeconomics.com/turkey/currency>

Currency depreciation *per se* does not qualify as a crisis, especially for a growing economy and more so ever depreciation triggered off by political circumstances rather than fundamental macroeconomic parameters. However, Turkey's appetite for credit and in particular, external credit denominated in dollar terms has put it in a rather precarious

situation that threatens to dislodge it from its high growth trajectory. The credit surge effectively began in Turkey in the early 2000s with private sector credit rising from just 15 percent of GDP in 2003 to 70 percent of GDP in 2016 (Figure 2).

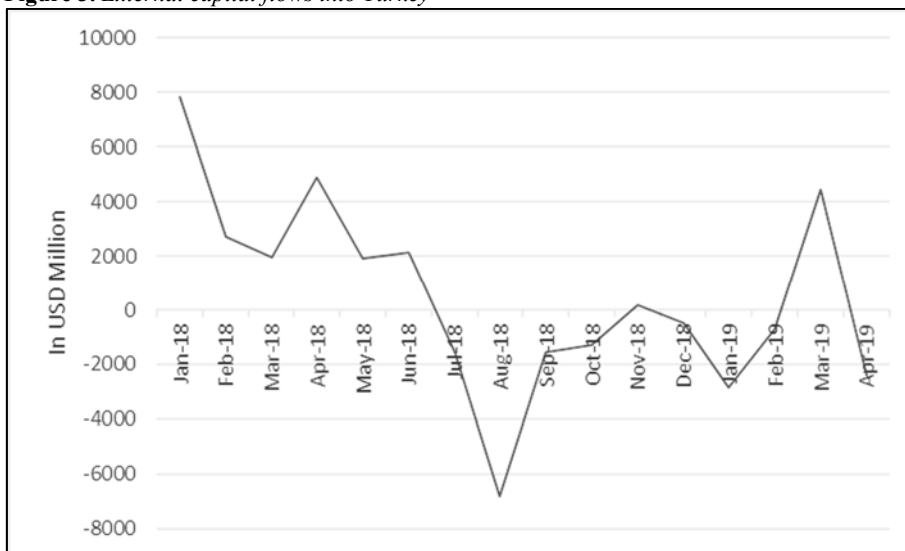
Figure 2. *Private sector credit growth in Turkey*



Source: available at <https://tradingeconomics.com/turkey/domestic-credit-to-private-sector-percent-of-gdp-wb-data.html>

Figure 3 presents inflow of foreign capital into Turkey. While demand (pull) for credit is an important factor, the supply (push) aspect cannot be undermined as a major contributor in driving this appetite for foreign credit.

Figure 3. *External capital flows into Turkey*



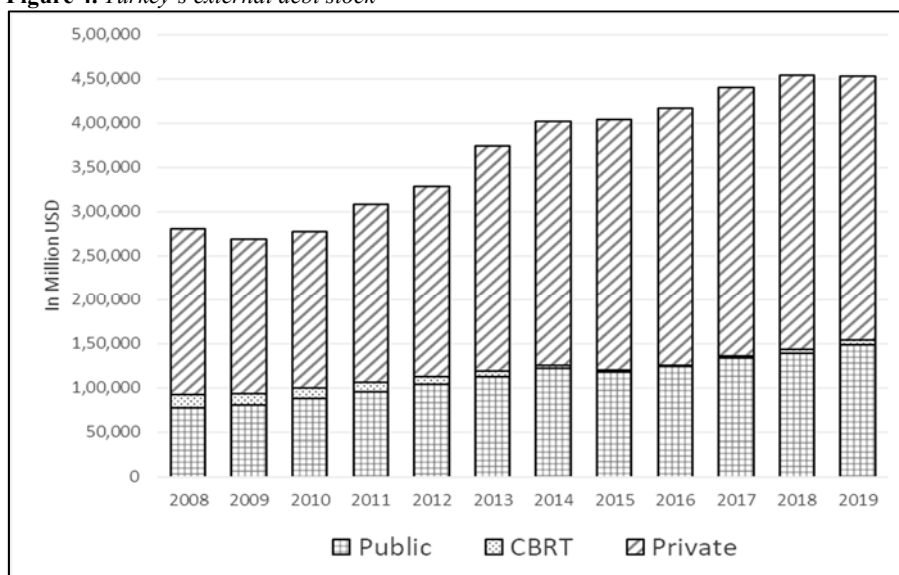
Source: available at <https://tradingeconomics.com/turkey/capital-flows>

With the adoption of expansionary monetary policy by the US Federal Reserve – more specifically, the quantitative easing program – in response to the global financial crisis of 2008-2009, interest rates across the developed countries touched historic lows making

external credit attractive for borrowers. At the same time, international investors too looked towards emerging markets and developing economies to earn greater yields on investment. Turkey was an appealing option for global capital owing to its high GDP growth rate at an average of 6.9 percent between 2010 and 2017 as opposed to 3.8 percent worldwide, economic reforms, its large and diverse national industry as well as a substantial high-middle income market out of its population of around 80 million.

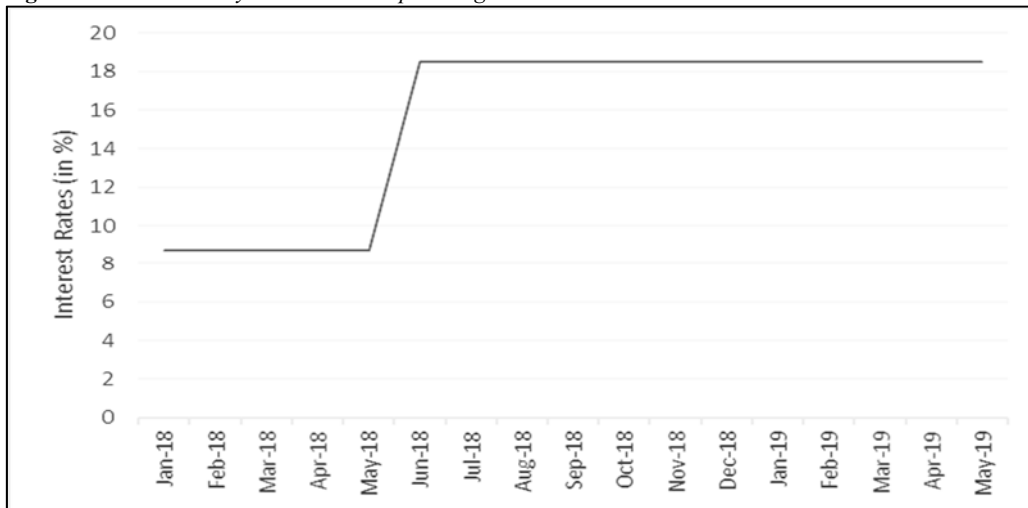
The increased capital flows led to a massive increase in Turkey's external debt, particularly of the private sector while public sector foreign debt grew just marginally throughout this period (Figure 4). Turkey's dependence on external financing renders it prone to crisis. Several factors ultimately contributed to what *post facto* seems an inevitable predicament; increasing financing costs rising with the U.S. Federal Reserve raising interest rates since 2016, growing concerns over Turkey's creditworthiness with expansionary fiscal and monetary policies in the months leading up to presidential and parliamentary elections in June 2018 and increased political conflicts between Turkey and the US. The hike in import tariffs in August 2018 by the Trump Administration was the final nail in the coffin – depreciating the lira and inflating the lira value of dollar-denominated debt.

Figure 4. Turkey's external debt stock



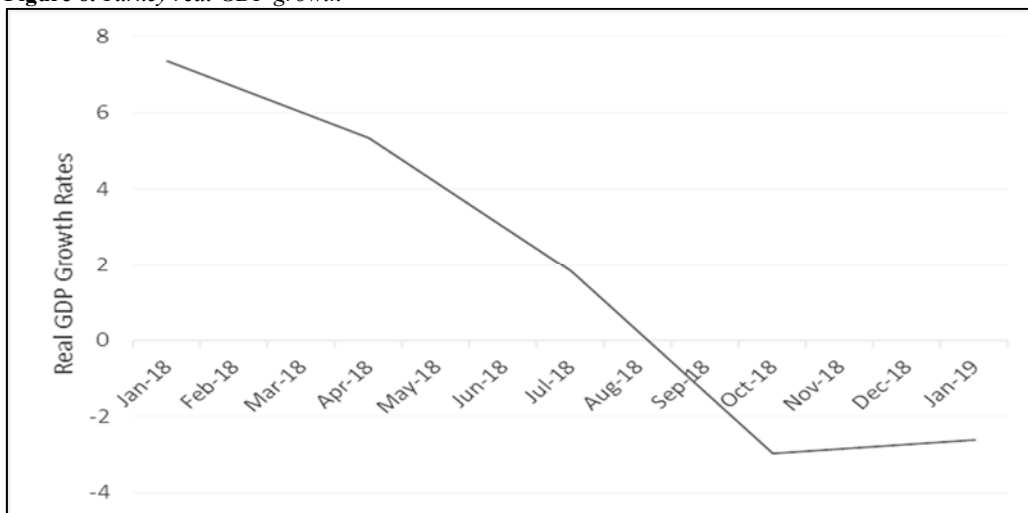
Source: Central Bank of the Republic of Turkey (CBRT).

Although initially defiant on increasing interest rates to quell the fall the lira, President Erdogan ultimately relented by allowing the Central Bank of the Republic of Turkey (CBRT) to raise interest rates sharply in September 2018 (Figure 5).

Figure 5. Interest rate by the CBRT hike post-August 2018 crisis

Source: available at <https://tradingeconomics.com/turkey/interest-rate>

Rapid hikes in interest rates trigger explosions in loan bubbles, leading to loan busts and recession; credit growth stalled (Figure 2) and capital flows turned negative (Figure 3), taking Turkey's GDP down by 1.6 percent in the third and 2.4 percent in the fourth quarter of 2018 (Figure 6).

Figure 6. Turkey real GDP growth

Source: available at <https://www.ceicdata.com/en/indicator/turkey/real-gdp-growth>

Meanwhile, the lira depreciation threatened to generate a surge of defaults across Turkey's institutions and corporations. With the lira value of dollar-debt spiking, the immediate challenge was to control the fallout which was not only finding sufficient lira for interest payments by corporations but also decline of investor trust making it difficult for companies to restructure debt, in particular, its rollover. To avoid the repercussions of debt

default that could shatter investor confidence and the prospects of external funding in future, may pressurize the Turkish government to provide financial support to private corporations. This could, however, imply additional government expenditure that runs counter to its proclaimed stand of fiscal consolidation.

To analyze the current crisis in Turkey and to study the implications of the macroeconomic policies available to deal with it, we use the Sectoral Financial Balances (SFB) model developed by the heterodox economist, Wynne Godley. Although the SFB model does not establish cause-effect relationships, it does ensure stock-flow consistency across sectors, allowing a more critical evaluation of the macroeconomic policies exhorted by economists and international institutions.

3. An overview of the Sectoral Financial Balances (SFB) model

Following Sivramkrishna (2016), we present the SFB model developed by the heterodox economist, Wynne Godley. It is based upon fundamental axioms of double entry book keeping; for every debit there must be a corresponding credit and for every financial asset there must be a corresponding financial liability. In this model, the economy is divided into three sectors, namely, the domestic private sector, government sector and the external sector which consists of both foreign private sector and foreign governments. The underlining rule is that the summation of the net financial asset accumulation of all the three sectors should add up to zero. In other words, if one sector is accumulating financial assets then at least one of the other sectors must be accumulating financial liabilities, making net accumulation by all sectors at the same time impossible so that:

$$(S_a - I_a) + (T_a - G_a) + (X_a - M_a) = 0 \quad (1)$$

or

$$(S - I) + (T - G) + (X - M) = 0 \quad (1')$$

where

S = domestic private sector savings,
 I = domestic private sector investment,
 G = government expenditure,
 T = tax revenues, M = imports and
 X = exports, all as percentages of GDP.

T, the subscript "a" for each component in equation (1) denotes absolute values and the components without the subscript "a" in equation (1') are values as a percentage of GDP.

In equation (1'), (S - I) refers to the net financial asset accumulation by domestic private sector, (T - G) refers to the net financial asset accumulation by domestic government sector and (M - X) refers to the net financial asset accumulation by external sector, as percentages of GDP. Note that $(X - M) < 0$ or current account deficit (CAD) necessitates a net financial inflow from abroad or the accumulation of financial liabilities (assets) by domestic sector (foreigners).

Rewriting equation (1), we get:

$$(S_a - I_a) = (G_a - T_a) + (X_a - M_a)$$

or from equation (1'),

$$(S - I) = (G - T) + (X - M) \quad (2)$$

To reiterate, net asset accumulation of the private sector entails a corresponding accumulation of liabilities by at least one of the two sectors; the government sector and/or the external sector.

It must be understood that although the equations hold in absolute terms as well as a percentage of GDP, there are important differences. For instance, a CAD as percentage of GDP may show an "improvement"; however, this could be happening as a result of both, exports and imports falling as GDP declines. Consider the following example:

$M = 25$ percent of GDP; $X = 20$ percent of GDP

Therefore, $(M - X) = 5$ percent of GDP

Now suppose GDP falls domestically as well as internationally so that both, X and M fall, so that:

$M = 15$ percent of GDP, $X = 12$ percent of GDP

Therefore, $(M - X) = 3$ percent of GDP.

The question, however, is whether the second situation can be considered as an improvement in CAD.

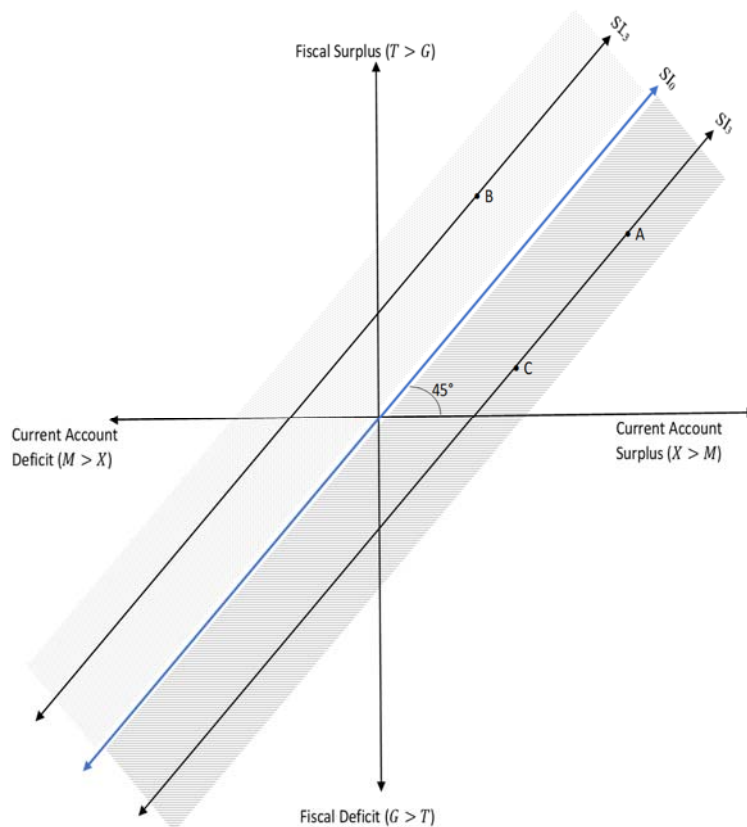
The SFB equation can be plotted on a coordinate plane (Figure 7). Any point on the 45° line (SI_0) shows $S - I = 0$ where CAS must be equal to a fiscal surplus as in quadrant 1 or CAD is equal to the fiscal deficit as in quadrant 3. Any point to the right of the 45° line represents the (shaded) region where $S - I > 0$ as for instance point A where the domestic private sector is accumulating a positive quantity of net financial assets. If at Point A, $(X - M)$ is (say) $+5$ and $-(G - T) = 2$ i.e. fiscal surplus is $+2$, then $(S - I) = +3$. At point C, if $(X - M) = -2$ and the fiscal deficit $(G - T) = +5$, then once again $(S - I) = +3$. Therefore, the line SI_3 is a locus of points with a positive net financial accumulation by the private sector of 3 percent of GDP. Similarly, any point to the left of the SI_0 is the (dotted) region $S - I < 0$. Point B shows the domestic private sector is accumulating a positive quantity of net financial liabilities. Moreover, the line SL_3 is a locus of points with a net financial accumulation of liabilities by the domestic private sector is 3 percent of GDP.

Although the domestic private sector can accumulate financial liabilities by being indebted to a sector outside itself (leveraging) in the short-run, it would have to, at some point of time, begin to pay back its debt, and move in the direction of the shaded region where $S - I > 0$. This process is called deleveraging, which entails accumulating net financial assets or reducing net financial liabilities by the domestic private sector so that, all else constant, consumption (as savings increase) and/or investment spending decline and consequently, GDP too. This, however, sets off an adverse chain reaction on other macroeconomic

parameters including the *post facto* quantum of savings that could further induce changes in the marginal propensity to save.

We have seen that for accumulation of net financial assets by the domestic private sector *outside itself* either the government sector (by running fiscal deficits) and/or the foreigners (by allowing the domestic economy to run CAS) must accumulate liabilities. Several questions arise here; first, why does the private sector accumulate financial assets? Savings accumulated as physical assets are neither physically safe nor financially secure. Assets like gold, land, property, and so on can lose value and could be stolen (gold) or face legal issues (land, property). Financial assets are therefore included in the savings portfolio of the private sector. The next question is why would the domestic private sector want to accumulate financial assets *outside itself*? Financial liabilities of the private sector are not secure; they may lose value – for instance, corporate bonds, equity shares, fixed deposits at banks – since these are ultimately backed by physical assets, like property, plant and equipment, and so on. The private sector would therefore want to include in its portfolio of financial assets, liabilities of foreigners (including foreign governments) or the domestic government, the liabilities of sovereign governments being the only liabilities not backed by physical assets but rather by the ability of the state to issue currency.

Figure 7. *The SFB template*



The appetite of the domestic private sector for net financial asset accumulation may vary depending on the state of the economy and outlook of private sector stability. When an economy is booming, the domestic private sector may not be averse to holding other private sector financial liabilities, usually in expectation of high returns. The government (through credit) and external sector too may hold such liabilities of the domestic private sector (by allowing the domestic economy to run CAD). On the other hand, in times of economic recessions and crisis, households and even private sector households and firms may prefer to hold their savings in government debt when private sector financial assets become risky.

A necessity for domestic private sector to accumulate government liabilities may also arise when private sector investment plummets – it stops issuing new liabilities – with savings increasing or remaining unchanged. In such situations, the government must accommodate the private sector's increased desire to net save through accumulation of financial liabilities, i.e. the government must issue its own liabilities by running larger fiscal deficits. In an open economy, the foreign sector may also afford an opportunity for the domestic private sector to accumulate financial assets; this, however, would happen only when the CAD decreases or CAS increases.

While the SFB model is useful in maintaining stock-flow consistency and is based on fundamental axioms of double entry book keeping, it is not a cause-effect model. It is only through a critical understanding, interpretation and analysis of economic parameters that deeper insights into state of the economy can be unearthed.

4. Turkey's SFB since 2012

Table 1 summarizes SFB components as a percentage of GDP for Turkey.

Table 1. Turkey's SFB Components as a percentage of GDP

Year	(G-T)	(X-M)	(S-I)
2012	-1.9	-5.5	-7.4
2013	-1	-6.7	-7.7
2014	-1.1	-4.7	-5.8
2015	-1	-3.7	-4.7
2016	-1.1	-3.8	-4.9
2017	-1.5	-5.6	-7.1
2018	-1.9	-3.5	-5.4

Source: available at <https://data.worldbank.org>

Note: Following Koo (2011), (S – I) has been computed as the sum of (G – T) and (X – M). Since data for S is usually not available and given that the SFB is an accounting identity it is better to compute it in this way.

Beginning with the government sector, Table 1 shows the Turkish government has been running a deficit over the last decade which has, however, been rather low and well below the benchmark target of 3 percent. This has also kept public debt low, which presently stands at just about 35 percent of GDP.

On the external front, as can be seen in Table 2 below, apart from import of fossil fuels, a substantial portion of Turkey's imports consists of industrial intermediate goods as well as capital goods. For several years now until the crisis of 2018, these large imports of

industrial goods have been driven by the domestic private sector's strong investment demand, leveraged through the inflow of foreign capital.

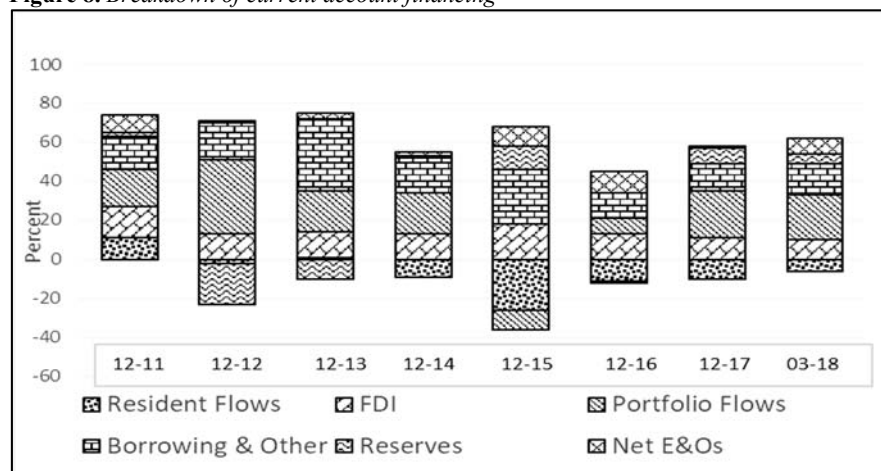
Table 2. Turkey's top ten imports by category

Particulars	Value	Percent
Mineral fuels, oils, distillation products	\$37.19B	18.32
Machinery, nuclear reactors, boilers	\$27.16B	13.38
Electrical, electronic equipment	\$21.15B	10.42
Pearls, precious stones, metals, coins	\$17.44B	8.59
Vehicles other than railway, tramway	\$17.43B	8.59
Iron and steel	\$16.76B	8.26
Plastics	\$13.27B	6.54
Organic chemicals	\$5.39B	2.66
Optical, photo, technical, medical apparatus	\$5.00B	2.46
Pharmaceutical products	\$4.45B	2.19

Source: available at <https://tradingeconomics.com/turkey/imports>

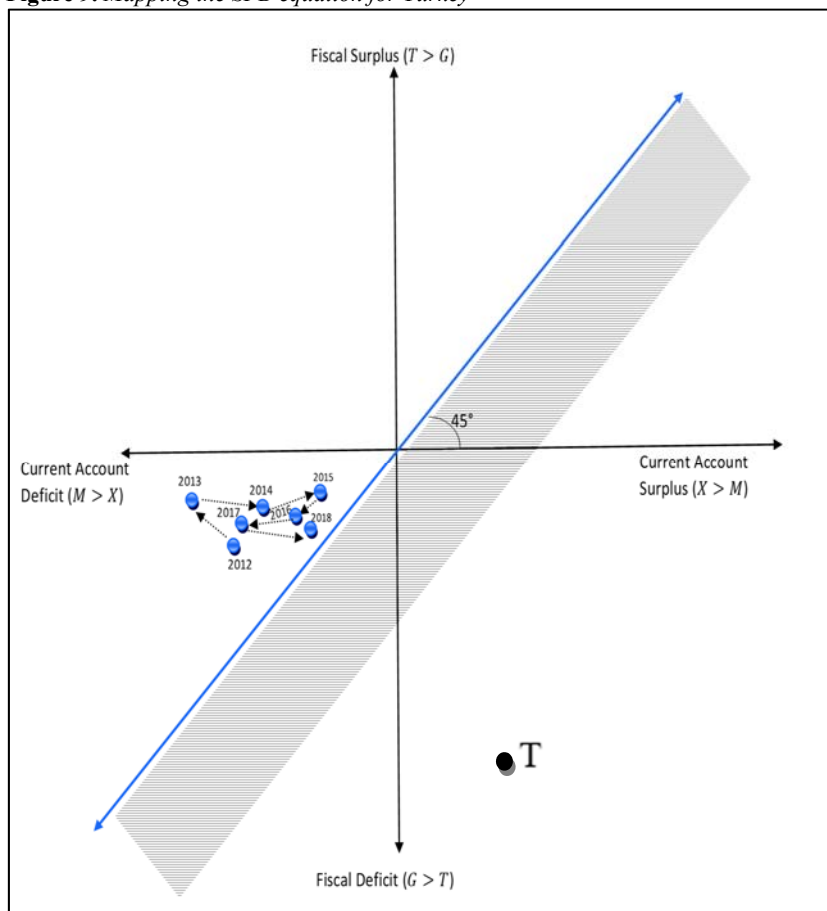
Figure 8 shows the funding sources of Turkey's CAD; a substantial portion is through the bond issuances and borrowing rather than the other components like portfolio investment, foreign direct investment (FDI) and change in reserves. In other words, the domestic private sector has been accumulating financial liabilities while the foreign sector has been acquiring corresponding financial assets in Turkey.

Figure 8. Breakdown of current account financing



Source: available at <https://think.ing.com/articles/turkish-current-account-deficit-widens/>

Drawing from Table 1, the SFB equation for Turkey has been shown graphically in Figure 9 for the period 2012-2018. The situation until about a year ago in Turkey was clearly one of leveraging by the domestic private sector. However, post-crisis of August 2018, the situation has reversed with CAD falling and the domestic private sector reducing its net financial accumulation of liabilities. A naïve reading of the SFB equation may lead to a misreading of the ongoing crisis in Turkey. A contraction in CAD (leftwards on X-axis in Figure 9) along with a modest increase in the fiscal deficit (downwards on the Y-axis in Figure 9), it would seem from the SFB equation, allows a readjustment towards a reduction in accumulation of net financial liabilities by Turkey's domestic private sector (movement towards the shaded region in Figure 9).

Figure 9. Mapping the SFB equation for Turkey

However, a more nuanced reading into the situation, constrained by the need to maintain stock-flow consistency as delineated by the SFB equation, is required to unravel the challenges to policy strategies being implemented by Turkey.

5. A critical analysis of Turkey's SFB changes in the aftermath of the 2018 Crisis

As seen earlier, the immediate impact of the August 2018 crisis was a sharp depreciation in the lira and repayment of external debt. As businesses began deleveraging, investment spending declined sharply, by almost 22 percent between July 2018 and end of 2018 (CEIC⁽¹⁾), pulling Turkey into a recession – the GDP forecasts are rather dismal with an overall contraction forecasted for 2019 (Devranoglu, 2019).

While, the depreciated lira stimulated exports (Anadolu Agency, 2019), the currency depreciation as well as the recession have reduced imports more severely. Between May 2018 and May 2019, exports increased by some 12 percent of GDP while imports saw a drop of almost 20 percent in the same period (Trading Economics)⁽²⁾. With these changes,

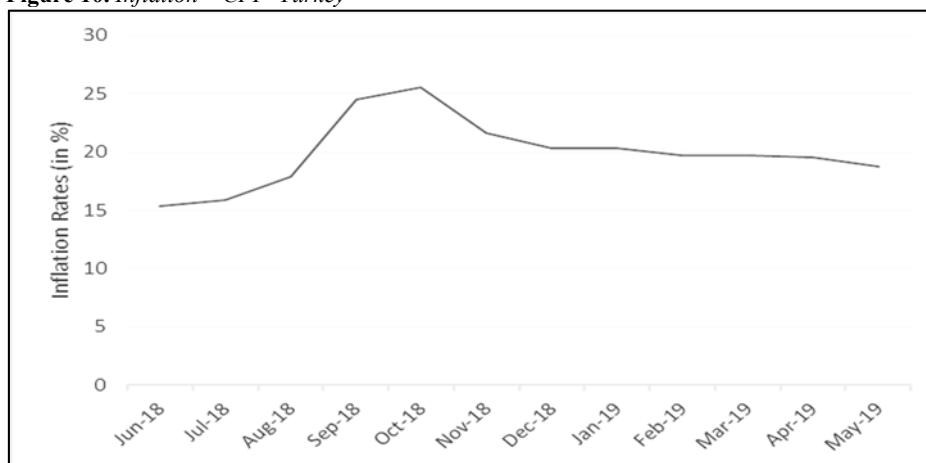
the CAD is expected to decline significantly and is estimated to be just 2.6 percent of GDP in 2019 (Daily Sabah, 2019a).

With investment spending and GDP declining, a rising value of net financial asset accumulation by the private sector as a percentage of GDP is consistent even with a declining quantum of savings; more precisely, any decline in S_a/GDP must not exceed the decline in I_a/GDP for $(S_a - I_a)/\text{GDP}$ or $(S - I)$ to show an increase. However, S_a/GDP and I_a/GDP could even show increases even if S_a and I_a are decreasing since GDP (the denominator) is also decreasing. In such a case, any increase in S_a/GDP must exceed the increase in I_a/GDP for an increase in net financial asset accumulation by the private sector, i.e. for $(S_a - I_a)/\text{GDP}$ or $(S - I)$ to show an increase.

Although it is difficult to obtain data on private sector savings, our analysis points to a situation in which Turkey's quantum of savings (S_a) could be declining along with a contraction of GDP, (paradoxically) driven by a higher propensity to save. Several macroeconomic variables are generally acknowledged to play a role in the savings decisions of the private sector, which include inflation and inflation expectations, unemployment, interest rates, consumer confidence and the level of consumer spending. For Turkey, a look at these parameters would point towards a higher propensity to save.

- 1) Inflation rates remained high in Turkey, although they have showed a declining trend since October 2018 (Figure 10).

Figure 10. Inflation – CPI – Turkey



Source: available at <https://www.inflation.eu/inflation-rates/turkey/current-cpi-inflation-turkey.aspx>

- 2) Inflation expectations continue to remain high (Ahval, 2019).
- 3) Households final consumption expenditure decreased by 8.9% in the fourth quarter of 2018 (Turkish Statistical Institute, 2019).
- 4) In April 2019, Turkey's unemployment was the highest in a decade at 14.7 percent with youth unemployment rate at an alarming 26 percent). Arthur Okun's misery index, which considers inflation and unemployment, shows that between April 2018 and April 2019, Turks are 60 percent more miserable (ibid.).

5) The consumer confidence index has shown a steep decline from 72.7 in July 2018 to a low of 55.3 in May 2019.

As one commentator recently put it, for the man on the street, “the situation is fast becoming intolerable.” (Tonak, 2019). This state of affairs must mean increasing insecurity over the future, driving households to thrift.

The falling consumption levels, partially propelled by the higher desire to save, can take Turkey into a vicious circle or what John Maynard Keynes termed as “paradox of thrift”; the desire for additional savings causes consumption and sales to fall, GDP to contract and unemployment to rise. In fact, the signs of falling sales are stark.

... the institute’s [state-run Turkish Statistical Institute] own data showing a fall in retail sales, a 10 percent contraction in Turkey’s construction sector, a 4 percent decline in manufacturing, a fall of between 20 percent and 50 percent in white goods and automobile sales despite months of tax discounts, ... (Dogan, 2019).

Accumulation of non-financial assets (especially buying of gold as a safe haven asset) that are not reflected in the SFB equation (which only considers financial asset accumulation) but which would dampen consumption of manufactured goods and services, and therefore sales of businesses, may also be worsening the situation in Turkey.

Turkey faces a further challenge in accommodating its private sector’s rising desire to save in safe financial assets; the availability of such assets to park their savings. Turkish stock markets have been volatile, sliding almost 20 percent after the 2018 crisis (Trading Economics⁽³⁾), bankruptcies are on the rise (Financial Times, 2019) and non-performing liabilities of banks are expected to double by 2020 (Schmidt, 2019). The fallout of these trends is unequivocally impacting asset quality adversely:

According to S&P, such concerning estimates were based on expectations of an “economic slowdown, deleveraging, continued lira depreciation, and increased interest rates”, all of which will exert pressure on asset quality over the next 12 to 18 months (ibid.).

So even if the marginal propensity to save increases, the opportunity to save in safe instruments is limited. The only available options would be physical assets like gold or government securities. The latter would, however, necessitate larger fiscal deficits, which is, as we shall see, in direct contradiction to the government’s austerity measures.

To summarize; the recession could lower the absolute quantum of savings (S_a) in spite of or rather, because of the increased propensity to save, which then cascades into a vicious cycle of further inducing a rise in the desire to save. However, even as the quantum of savings decline there could even be an upward movement in the *post facto* savings rate (S_a/GDP) if GDP is declining by even more than S_a . Given the massive decline in I_a and consequently, I_a/GDP , the net financial asset accumulation by the private sector may show an improvement when computed as a percentage of GDP, i.e. an increase in $(S - I)$. And this could be precisely what is observed in the SFB diagram (Figure 9) where there is a deceptive “improvement” in the financial asset accumulation of the private sector along with a decline in the CAD (which is declining from falling imports – M_a – on account of

depreciating lira and falling GDP) and only a marginal increase in the fiscal deficit ($G - T$), which continues to remain well below the 3 percent of GDP threshold.

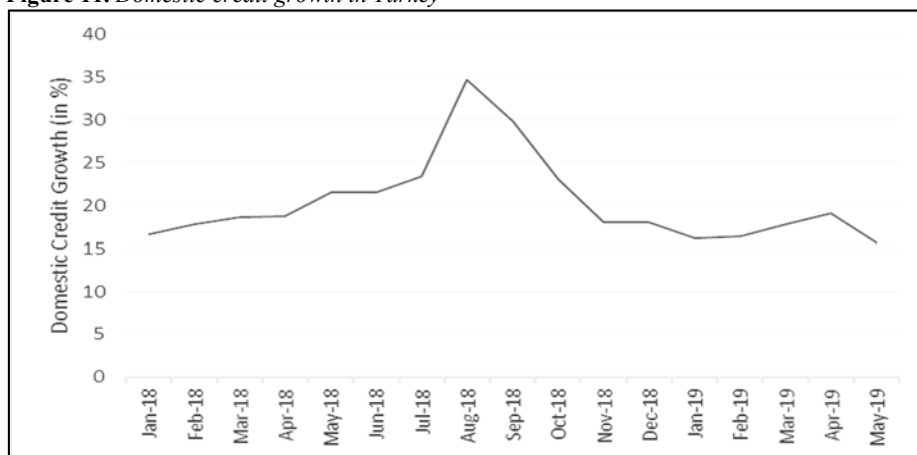
6. Policy Interventions in Response to the 2018 Crisis

Monetary Policy

One of the first policy steps adopted by the CBRT was to raise interest rates sharply in September 2018 by 6.25 percent, from 17.75 to 24 percent. For several years, President Erdogan had influenced the Central Bank to pursue a policy of low interest rates to stimulate investment and growth, maintaining negative real interest rate policy. However, with the lira hammered during the crisis of 2018, the Central Bank had no other option available to stem a complete collapse of the lira but with a substantial hike in interest rate. The immediate repercussions of tightening monetary policy were fall in investment and lower GDP; however, the sliding lira and acceleration in inflation were reined in within a short period of time.

With inflation remaining stubborn and lira beginning to slide once again in 2019, the CBRT continued to tighten interest rates as well as availability of liquidity in the domestic economy. In May 2019, it announced the suspension of repo auctions at the stipulated 24 percent interest rate; instead, liquidity (central bank reserves) was available in the overnight money markets at 25.5 percent or the late liquidity window at a much higher 27 percent. Commercial banks were also allowed to hold a proportion of their lira reserve requirements in foreign exchange, called the Reserve Options Mechanism (ROM). By decreasing the upper limit for the foreign currency maintenance limit from 40 to 30 percent, the CBRT was able to increase foreign currency liquidity in the market while decreasing lira liquidity (Maqsood, 2019). With these steps, the lira now trades at 5.75/US\$ from 6.20/US\$ on the day of revised ROM announcement, i.e. 9 May 2019. The downside to this move has, however, led to a lira crunch in the banking system and slowing down credit expansion (Figure 11).

Figure 11. Domestic credit growth in Turkey



Source: available at <https://www.ceicdata.com/en/indicator/turkey/domestic-credit-growth>

Questions, however, remain as to how Turkey will manage the recession and growing unemployment. After all, a high inflation rate in the context of falling GDP and rising unemployment – what is being called “slumpflation” (Aliriza, 2019) – can have adverse political implications too. For years, Erdogan’s policies pumped Turkey on to a high growth trajectory based on private sector investment from overseas borrowing, which came at the cost of unmitigated inflation, supported by a low interest rate policy and credit guarantees. With monetary policy targeted at the inflation and exchange rate, the Turkish government looked at fiscal policy to address the issues of growth and employment.

Fiscal Policy

Soon after the crisis in August 2018, the Ministry of Treasury and Finance of the Turkish government (Ministry of Treasury & Finance, 2019) unveiled a fiscal plan for the battered economy. The focus was to support tightening of monetary policy measures with austerity policies – or fiscal discipline – so as to check the acceleration in the inflation rate and a depreciating lira. The inflation target was brought down to just 6 percent by 2021 while the deficit was to remain below the 2 percent level during this period. While the plan mentioned cancelling of several new investment projects, it also called for financing of mega investment projects through external borrowings rather than through government deficit spending. The hope, which is discernible from the plan, is to first stabilize the economy in particular, inflation and depreciating lira, and then put it back on a high growth path with high value-added manufacturing (investment) and substantially increased exports.

To analyze the viability of this fiscal policy plan while maintaining stock-flow consistency, we once again revert to the SFB model. To maintain or decrease the level of fiscal deficit as a percentage of GDP in the context of the present recessionary trend requires the Turkish government to substantially reduce the quantum of the deficit ($G_a - T_a$). To achieve this, the fiscal program announced cancellation of several large projects, which implied a further contraction of the economy in addition to that caused by reductions in private sector investment spending.

However, as we have seen with contraction of CAD, reducing fiscal deficits as a percentage of GDP could be a race to the bottom – like austerity policies across the world have shown. This is essentially because the fiscal deficit acts as an automatic stabilizer; cuts in government spending leads to declining output and incomes, thereby reducing tax collections and increasing transfer payments (unemployment benefits). This could even cause the absolute level of ($G_a - T_a$) to rise or at best, not decrease substantially. With falling GDP, a rising fiscal deficit as a percentage of GDP or $(G_a - T_a)/GDP$ may be the outcome of the futile exercise. This would then induce the government to call for greater austerity measures even as the economy witnesses severe contraction.

So what does the SFB model tell us about the fiscal policy options open to Turkey? The context is clear – the private sector’s desire for net financial asset accumulation (deleveraging) is driving the economy to a point on an SI line to the right of SI_0 and into the shaded portion. If the fiscal deficit as a percentage of GDP is to be maintained around its present level as GDP contracts (so that in absolute terms a strong dose of spending cuts is implemented), then with a reduction in CAD, Turkey could move to point T in Figure 9.

It is, however, critical to understand that while net financial asset accumulation can be achieved by the domestic private sector, the process entails pushing the economy into a recession. The government's austerity plans to reduce the fiscal deficits as a percentage of GDP only adds fuel to the raging fire. With stagnant or marginal increase in exports, reduction in CAD is achieved through falling imports coming from falling GDP and the fiscal deficit is kept low through massive cuts in expenditures. This indeed seems the plan; contract the economy to control inflation, stabilize exchange rates and reduce interest rates that will then hopefully, stimulate private sector investment (in value-added manufacturing) and exports.

The hope for Turkey's revival then is not austerity but reversing the trend in the current account balance through a massive increase in exports rather than contraction of imports. From equation (2), it can be seen that increased exports will drive positive GDP growth, larger tax receipts and smaller deficits even with increasing of government expenditure. In other words, $(G - T)$ may fall even though $(G_a - T_a)$ may be larger since GDP is larger. This will also support a larger quantum of financial asset accumulation by the private sector, ensuring its deleveraging objective is met.

7. Summary and conclusion

Turkey is clearly undergoing a deleveraging cycle, wherein the private sector is attempting to reverse its position from an accumulation of financial liabilities to the accumulation of financial assets. To do so it cuts consumption spending and with private investment and government spending declining, a severe contraction in Turkey can be expected. This could actually raise the fiscal deficit as government transfers and other unemployment allowances rise along with falling tax receipts (the fiscal deficit as an automatic stabilizer). To counter this possibility, the government may implement large cuts in spending with a severe and adverse impact on GDP.

This contraction in GDP could, however, be countered with a steep increase in Turkey's exports, something which the government is hoping would happen once the lira and inflation are quickly brought under control.

Two possible scenarios from analysis of the SFB equation:

In the first situation, exports witness a tepid increase while imports fall, which does lower the CAD significantly. Moreover, the pursuit of austerity with a cut in government expenses adds to the recessionary trend. If with this, the government is able to reduce the fiscal deficit $(G - T)$ then any movement to the shaded region in Figure 9, i.e. a reduction in accumulation of net financial liabilities by the domestic private sector will come about due to a "improvement" in CAD induced by falling imports on account of a contracting economy.

The second scenario is the one that augurs well for Turkey with its present set of policies that focus on disinflation and stabilizing the lira – steep increase in exports that reverses the recessionary trend and boosts GDP. This could mean higher tax collections (T_a) and increases in quantum of savings. Government spending (G_a) could be raised even as the

deficit ($G - T$) remains within reasonable bounds. Supported by larger government spending and the reduced CAD (or if possible a CAS), the private sector could end up with a higher financial net asset accumulation or a lower quantum of financial liabilities.

The question is now which of the above two scenarios is likely to play out for Turkey. The current account is no doubt likely to see an unequivocal “improvement” with rising exports due to the depreciation of the lira and falling imports induced by the recession. The contraction in the economy and the equilibrium (where SFB readjust to new levels of GDP) is therefore dependent on how soon and by how much exports increase. Put differently, will the increase in exports be substantial enough to reverse the recessionary trend as in the second scenario described above? Although there has been some good news for Turkey on the export front (Daily Sabah, 2019b) doubts remain about the sustainability of such export growth (Sonmez, 2019) – especially in the context of US protectionism, trade penalties likely to be imposed by the US on account of Turkey’s S-400 missile defence system procurement from Russia and sluggish global economic growth.

Notes

- (1) Sourced from <https://www.ceicdata.com/en/indicator/turkey/investment--nominal-gdp>
- (2) Sourced from <https://tradingeconomics.com/turkey/imports> and <https://tradingeconomics.com/turkey/exports>
- (3) Sourced from <https://tradingeconomics.com/turkey/stock-market>

References

- Ahval, 2019. *Turkish inflation expectations worsen for second month*, available at <<https://ahvalnews.com/turkey-economy/turkish-inflation-expectations-worsen-second-month>>
- Aliriza, Bulent, 2019. *The Turkish economic slowdown in 2018*, available at <<https://www.csis.org/analysis/turkish-economic-slowdown-2018>>
- Anadolu Agency, 2019. *Turkey's exports total nearly \$60B in Jan-April*, available at <<http://www.hurriyetdailynews.com/turkeys-exports-total-nearly-60b-in-january-april-143151>>
- Daily Sabah, 2019a. *Turkey's current account gap drops to \$589M in March, at its lowest since 2009*, available at <<https://www.dailysabah.com/finance/2019/05/13/turkeys-current-account-gap-drops-to-589m-in-march-at-its-lowest-since-2009>>
- Daily Sabah, 2019b. *Turkey's exports rise in March, hit all-time high in Q1 with \$44.5 billion*, available at <<https://www.dailysabah.com/economy/2019/04/04/turkeys-exports-rise-in-march-hit-all-time-high-in-q1-with-445-billion>>
- Devranoglu, Nevzat, 2019. *Turkey's economy to contract in 2019, longer recession ahead* available at <<https://www.reuters.com/article/us-turkey-economy-poll/turkeys-economy-to-contract-in-2019-longer-recession-ahead-idUSKCN1RO19Y>>
- Dogan, Zulfikar, 2019. *Erdoğan's talk of economic revival jars with business closure explosion*, available at <<https://ahvalnews.com/turkey-economy/erdogans-talk-economic-revival-jars-business-closure-explosion>>

- Financial Times, 2019. *Turkish companies seek bankruptcy protection as slowdown bites*, available at <<https://www.ft.com/content/0e27734a-0392-11e9-99df-6183d3002ee1>>
- Koo, R.C., 2011. *The Holy Grail of Macro Economics: Lessons from Japan's Great Recession*. Singapore: John Wiley & Sons.
- Maqsood, Fawad, 2019. *Turkey's central bank plans to cut FX reserve requirement upper limit*, available at <<https://www.brecorder.com/2019/06/28/506071/turkeys-central-bank-plans-to-cut-fx-reserve-requirement-upper-limit/>>
- Ministry of Treasury & Finance, 2019. *Republic of Turkey, New Economic Program: Balance-Discipline-Transformation, 2019-2021*, available at <<https://ms.hmb.gov.tr/uploads/sites/2/2019/04/New-Economy-Program-2019-2021.pdf>>
- Schmidt, Hilary, 2019. *A precarious 2019 awaits turkey's banks*, available at <<https://internationalbanker.com/banking/a-precarious-2019-awaits-turkeys-banks/>>
- Sivramkrishna, Sashi, 2016. Cracks in BRICs: A sectoral financial balances analysis and implications for macroeconomic policy. *Theoretical and Applied Economics*, Vol. XXIII, No. 3(608), pp. 53-78.
- Sonmez, Mustafa, 2019. *Why Turkey's export rise is hard to sustain*, available at <<https://www.al-monitor.com/pulse/originals/2019/03/turkey-why-export-rise-is-hard-to-sustain.html>>
- Tonak, Ahmet E., 2019. *The Turkish economy: worse than a recession*, available at <<https://mronline.org/2019/03/18/the-turkish-economy-worse-than-a-recession/>>
- Turkish Statistical Institute, 2019, *Quarterly Gross Domestic Product, Quarter IV: October-December, 2018*, available at <<http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=30886>>