A current account deficit is sustainable when its underlying drivers support a smooth correction in the future. It is unsustainable when symptomatic of macroeconomic imbalances that would eventually trigger disruptive adjustments. Although a current account deficit in itself is neither good nor bad, it is likely to be unsustainable and lead to harmful consequences when it is persistently large, further consolidation rather than investment, occurs along with excessive domestic credit growth, follows an overvalued exchange rate, or accompanies unrestrained fiscal deficits. Even though a current account deficit is often paralleled by deteriorating net foreign assets, it may not be as informative about immediate-term financial vulnerabilities as the size, maturity, and currency composition of gross financial stocks.

Determinants of a current account deficit

The first step towards evaluating whether a deficit is good or bad is to understand its drivers — what underlying conditions might explain a deficit? Some of the drivers reflect economic, social, and demographic characteristics that imply a benchmark for normal current account deficits; while other drivers include government policies and institutional features that may mitigate or exacerbate a departure from the benchmark. Empirical analyses typically map the current account, as a ratio to national income, to factors affecting saving and investment (for an extensive list of determinants, see Calderón, Chong, and Loayza 2002, and Cusolito and Nedeljkovic 2013).

Table 2 presents key fundamentals (income, demographics, trade and financial characteristics) and policy levers (macroeconomic policies and the institutional environment) that affect current account deficits. These determinants are used in several empirical studies and/or in the baseline External Balance Assessment (EBA) econometric model run by the International Monetary Fund (IMF) (IMF 2018, Phillips et al. 2013). These are discussed next.

Income. Higher average output growth or productivity may either reduce or increase a current account deficit. This depends on whether they signal a temporary or permanent increase in income. If temporary, saving would rise and the deficit declines, especially in the short term. However, with time to adjust, changes in investment could match that of saving when all the income shock is invested domestically given existing portfolio composition considerations between domestic and foreign assets (Krøy and Ventura 2000, 2002). If the income increase is permanent, consumption and investment would rise and the deficit increases. Empirical results suggest that on balance, deficits do tend to rise with higher average output growth or productivity. There is also a recognized relationship between the level of income and the current account deficit. According to the "stages of development" hypothesis, deficits in poor countries are high as their economies start to grow and import more physical capital; later, deficits fall as countries reach advanced status. Empirically, deficits and development status have a negative relationship.

Demographics. Population growth driven by rising birth rates results in a higher young dependency ratio (the number of persons under the age of 15 relative to the working-age population), which in turn is associated with lower saving, and thus higher deficits. Growth in the working-age population, however, can have ambiguous effects, driving up both saving and investment. A higher old-age dependency ratio (the number of persons aged 65 and above relative to the working-age population) would imply lower saving. On the other hand, a rapidly aging population is associated with higher saving and lower deficits, as it partially signals higher longevity.
The single-entry bookkeeping system of the balance of payments means that the sum of CAB and KAB is equal to ΔNFA

Table 1. Overview of National Accounts and the Balance of Payments

| Determinant                      | Domestic | External | B. Balance of Payments |
|----------------------------------|----------|----------|------------------------|
| Supply of goods and services (Y = Y + M) | Domestic output (Yt) and import of goods and services (Mt) | Yt | M |
| Use (Y + I + G + C + X + NFA)     | Intermediate consumption (IC), final consumption (C), investment (I), and exports of goods and services (X) | I + C + I + X |
| Gross Domestic Product (GDP = Yt - IC) | C + I   | X - M    | TBJ TRADE BALANCE (X - M) |
| Gross National Disposable Income (GNDI) = GDP + Income balance (IB) | C + I   | TBJ + IB |
| Saving = GNDI - GNDI = Investment (I) + Financial saving (CAB) | TBJ + IB |

The double-entry bookkeeping system of the balance of payments means that the sum of CAB and KAB is equal to ΔNFA

Table 2. Determinants of Current Account Deficits

| Determinant                      | Theory | Direction of Effect | Empirical | Channel |
|----------------------------------|--------|---------------------|-----------|---------|
| Income                           | CAD/NY | +/-                 | CAD/NY    | +/-     |
| Demographics                     |        | Stage of development (per capita income level) |           |         |
| Ageing speed*                    |        | +                   |           | +       |
| Trade Factors                    | Oil and natural gas net exports | +/+ | +/+ |
| Terms-of-trade volatility        | +/+    | +                   | +         | +       |
| Trade openness (Sum of exports and imports/GDP) | +/-   | +                   | +         | +       |
| Financial Factors               | Financial depth | +/- | + | + |
| Reserve ratio currency status    | +/-    | +                   | +         | +       |
| Macroeconomic Policies and Institutional Environment | fiscal balance | 0 | + | + |
| Reserve accumulation             | Capital controls | Reserve accumulation | Capital controls |
| Institutional Environment        |        | +                   | +         | +       |

Source: Authors’ tabulation of the majority outcome of statistically significant results from the studies listed under Reference. The section entitled “Empirical Results from Literature Survey” and the previous survey in Calderon, Chong and Loayza (2002). Note: Estimated effect is based on an increase in the determinant (and lower risk in the case of institutional environment).

Table 3. Macroeconomic Policies and Institutional Environment

| Determinant                      | CAD/NY | NY/NP | S/N | I/N |
|----------------------------------|--------|-------|-----|-----|
| Decline in deficit               | -      | +     | -   | -   |
| Increase in deficit              | +      | +     | -   | -   |
| Ambiguous                        | +      | +     | -   | -   |
saving and higher growth increasing it), thus having an ambiguous effect on current account deficits. Empirically, however, the evidence suggests that a better institutional environment is associated with bigger deficits.

From the above, we can see that a current account deficit can be an optimal response given a country’s fundamentals, many of which signal strength (for example, higher average output growth, low terms-of-trade volatility, and financial deepening). A deficit can also be optimal in response to fundamentals that reflect structural factors (such as the development or demographic stage of a country) or cyclical conditions (notably, a positive output gap and a negative terms-of-trade shock). In the face of structural factors, the current account deficit would take time to adjust to a balanced state (Cavasos-Quintero and Chong 2002). In response to cyclical factors, the current account deficit may represent an appropriate buffer response (Ghosh and Ramakrishnan 2012; Kraay and Ventura 2002) and will likely rebalance (Cusolito and Nedeljkovic 2013). In either case, current account deficits may warrant consideration of corrective policies if the deficits are misaligned with the underlying fundamentals, and how policymakers respond to underlying fundamental changes. The potential for long-term growth is key. A deficit should be driven by this growth prospect as well as reinforce it – by way of quality investments.

Identifying an unsustainable current account deficit based on its determinants

Naturally, errors and omissions aside, the world must have a balanced current account; so, if some countries run deficits, others should run surpluses. Whether the previous determinants point to a deficit being sustainable depends on what they imply about meeting net external obligations given their terms of trade and fundamentals and how policymakers respond to underlying fundamental changes. The potential for long-term growth is key. A deficit should be driven by this growth prospect as well as reinforce it – by way of quality investments.

It matters then if fundamentals and policy settings are driving consumption and/or investment, and if they are reflecting distortions or problems elsewhere. As noted in the previous section, a deficit is optimal given certain income and demographic characteristics – higher productivity or average income, growth, and/or investment, and if they are reflecting distortions or problems elsewhere. Governments can have a beneficial effect if they implement such corrective policies. However, government policies can lead to abnormal current account deficits when they generate price and cost distortions, promote excessive risk taking, and reflect reckless fiscal and monetary regimes. It can be argued that unsustainable current account deficits can be traced back to a government failure in taking corrective policies or in inducing a proper economic environment.

Deficits linked to production and trade structures, meanwhile, need not mirror domestic distortions but rather comparative advantages. Sound profit maximization motives are likely at play in firms’ decisions to relocate abroad. Evidence suggests that innovating countries still earn most of the profits with the disaggregation of innovation and production (see Dedrik, Kraemer, and Linden 2009; and Xing and Detert 2010 for a discussion of the iPod/iPhone production network). Value-added trade also paints a different picture of competitiveness than gross trade. For instance, the United States continues to have robust comparative advantage in manufacturing industries (Dai 2013), and the bilateral trade deficit with China is significantly smaller in value-added terms than in gross terms (Johnson and Nugueria 2012; Xing and Detert 2010). Further, global firms operate across geographical borders and this complicates the measurement of trade and income balances which are residency-based (Avdjiev et al. 2018). Some current account deficits may reflect this tension between the nature of global economic activity and its measurement, rather than outright excesses.

In terms of policy settings, a deficit coinciding with exchange rate overvaluation (that may be propped by intervention which prevents the exchange rate from being a shock absorber), excess credit, and relatively large budget deficits risks over-consumption and over-investment. Calling out such policy gaps that are resulting in suboptimal behavior, however, requires a normative stance and establishing benchmarks (see, for instance, Phillips et al. 2013 on identifying policy gaps under the IMF External Balance Assessment (EBA)).

The importance of establishing what drives current account deficits can be appreciated with the IMF’s recent EBA results (IMF 2018) for those countries among the world’s largest 29 economies that have deficits (Figure 2). The model-based assessment of excessive current account deficits is given by the sum of policy gaps and unexplained regression residuals after accounting for current account “norms” (reflecting most of the fundamentals and policies in Table 2, with the latter set at desirable levels) and cyclical factors. For some countries (Brazil, India, and Mexico), estimated norms (the gray bar in Panel a) established a deficit that went beyond the actual one (black dot in Panel a), given their lower income, higher growth potential, and faster population growth, resulting in no overall excesses. For the United States, which has the unique advantage of its reserve currency status, the current account norm suggests a larger deficit than its peers (IMF 2017); while the U.S. actual deficit was 2.4 percent, the excess amounted to about 1.5 percent. For several countries with relatively large deficits (Argentina, Canada, Turkey, and the United Kingdom), identified policy gaps (denoted by the negative yellow and red bars in Panel a) played a role in contributing to excesses. However, unexplained residuals (denoted by the negative blue bars in Panel a) were found to be more important. In some instances, the unexplained residuals were correlated with shortcomings in structural policies, though not explicitly modelled (for example, labor market

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**Figure 2. IMF Assessment of Current Account Deficits in 2017**

Source: Authors’ illustration based on data from IMF (2018). See IMF (2018) for further details on the current account and real effective exchange rate (REER) assessments. Note: IMF-staff assessed excess current account deficit/surplus = EBA model-based gap - IMF staff adjustment; where EBA model-based gap = Policy gaps + Unexplained regression residual

**a. Decomposing the Sources of Current Account Deficits**

- Cyclical factors
- Fiscal balance gap
- Unexplained regression residual
- Actual current account deficit

**b. Excess and Normal Current Account Deficits**

- Current account deficit, % of GDP
- REER Over (+)/ Undervaluation (−), %

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Cyclical factors = output gap and commodity terms of trade gap. Fundamentals = output per head, expected GDP growth five years ahead, lagged NFA, oil and natural gas net exports, institutional/political environment, old age dependency ratio (OADR), population growth, prime-age population (45-64) to working-age population ratio, life expectancy at prime age (standalone and interacted with future OADR), demeaned VIX, reserve currency status. Policy gaps = the differences between actual and desirable policies.

**Source:** Authors’ illustration based on data from IMF (2018). See IMF (2018) for further details on the current account and real effective exchange rate (REER) assessments. Note: IMF-staff assessed excess current account deficit/surplus = EBA model-based gap - IMF staff adjustment; where EBA model-based gap = Policy gaps + Unexplained regression residual. **Cyclical factors** = output gap and commodity terms of trade gap. Fundamentals = output per head, expected GDP growth five years ahead, lagged NFA, oil and natural gas net exports, institutional/political environment, old age dependency ratio (OADR), population growth, prime-age population (45-64) to working-age population ratio, life expectancy at prime age (standalone and interacted with future OADR), demeaned VIX, reserve currency status. Policy gaps = the differences between actual and desirable policies.
distortions in Turkey and South Africa). Most deficit countries also had indications of currency overvaluation, and, revealingly, the percent of overvaluation (denoted by the numbers in red in Panel d) was more strongly correlated with the magnitude of excess deficits than with the size of the actual deficits.

Out-of-model judgment to account for country-specific characteristics (denoted by the green patterned bars in Panel a) led to overall IMF assessments of excess deficits that were less than the EBA-identified excess deficits at times seeming rather arbitrary, including for characteristics such as large gold imports (Turkey), high mortality risk (South Africa), and mismeasurement (Canada and the United Kingdom). Although meant as a starting point for country-specific analysis and policy discussion and not to predict future events, the models nevertheless ought to be tested for their out-of-sample performance. This can not only improve their quality as assessment tools but also help dispel notions of arbitrariness.

What current account deficits miss regarding near-term financial vulnerabilities

Against the backdrop of large gross financial flows and stocks, current account deficits are insufficiently informative about the immediate risks to financial stability, for several reasons (Obstfeld 2012). First, there is a disconnect between accumulated current account balances and the net international investment position (NIIP) (NAF adjusted for valuation effects due to exchange rate and asset price changes), especially over shorter time spans. Valuation effects now account for a growing part of NIIP dynamics, given the size of financial stocks (Forbes, Hjortsoe, and Nenova 2017). Second, NIIPs are not risk-free (e.g., Disyatat 2010) that present risks even without imbalances in the current account or NIIP, depending on the type of gross financial liabilities, maturity and currency mismatches with respect to gross financial assets, and the potential significant impact of asset price change. Financial liabilities that are stable (such as foreign direct investment (FDI)), that foster greater automatic risk sharing (such as equity), or that correspond to investors with a longer time horizon limits the fallout from a negative domestic shock and reduces the probability of contagion of an external shock (forbes 2013). For instance, while Argentina and Turkey had been highlighted for having large excess current account deficits with some policy gaps, both have been especially vulnerable in recent times given the high share of short-term foreign liabilities in their NIIPs (IMF 2018). Aggregate NAF may also hide imbalances across sectors. For example, globally and across years excess current account deficits, the Republic of Korea was badly affected during the global financial crisis. Banks and corporates with high external debts and negative net positions were hit by large financial outflows and sharp exchange rate depreciation (see, for example, Avdijev, McCauley, and Shin 2016).

Meanwhile, the conflation of the real resource constraint in the national accounts (abstaining from consumption releases real resources for investment/exports) with domestic financing constraints exaggerates the adverse implications of deficits – the saving-investment gap is often taken to reflect a contemporaneous insufficiency of domestic funds to finance domestic expenditure. Contrary to the loanable funds theory (loans are limited both in amount and in the same period), however, saving does not constrain the creation of domestic credit by banks (Borio and Disyatat 2015; Lindner 2015).

The previous discussion suggests that differences in actual vulnerabilities between current account surpluses and deficits may not be clear cut. However, perceived vulnerabilities are undoubtedly greater for deficits, which are used to proxy reliance on foreign borrowing and exposure to external shocks, the aversion and sentiment. During the taper tantrum in 2013, Brazil, India, Indonesia, South Africa and Turkey, dubbed the “fragile five” by Morgan Stanley, came under the heaviest investor scrutiny but had little in common other than current account deficits (Forbes, Hjortsoe, and Nenova 2017).

Conclusion

A bad current account deficit is characterized by underlying consumption and investment drivers, including policies, that raise doubts about a country’s long-term external solvency or are symptomatic of problems elsewhere in the economy. A good deficit supports smooth transitions — for instance, from building productive capacity while accumulating external liabilities, to building financial assets, and then drawing them down as the population ages. While traditional determinants continue to help explain deficits, the complexity of globalized economic activities requires a more careful consideration of measurements and frameworks for assessments (for example, residency-based versus consolidated economic units). Good deficits, or even surpluses, are not necessarily safe from financial stress at any moment in time. The vulnerability to stress depends on the characteristics of gross financial stocks, especially if large, and the balance sheets of different sectors.

Sound policies and institutional features can go a long way to attracting and sustaining a healthy demand for domestic assets. Australia, for example, has demonstrated considerable resilience, despite having sizeable current account deficits for much of its history: its vulnerability is less than what its headline negative NIIP might suggest because its foreign liabilities are mostly in Australian dollars, foreign currency debts are well hedged, macroeconomic policies are sound, and its economy shows no signs of major economic distortions (Belk, 2015; Cockerell, and Kent 2007; IMF 2018).

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