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OBEN/20/02

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What's different about the current business cycle downswing?

Philadelphia Makhanya

Abstract

South Africa is in the longest business cycle downswing in its history. This note examines the behaviour of different components of GDP during downswings, and contrasts the current downswing with historical patterns. We find particularly stark differences in imports (stronger during this downswing) and public investment (significantly weaker than usual). The note further considers drivers of business cycle upswings, for clues as to how the current downswing might ultimately end. Analysis of upswings shows that imports and private sector investment spending, which tend to contract sharply during downswings, are also the components that tend to expand the most during upswings, with imports growing strongly from the start of the upswing.

1. Introduction[1]

South Africa is in the longest business cycle downswing in its history. This note examines the behaviour of different components of GDP during downswings, and contrasts the current downswing with historical patterns. We find particularly stark differences in imports (stronger during this downswing) and public investment (significantly weaker than usual). The note further considers drivers of business cycle upswings, for clues as to how the current downswing might ultimately end.

2. Putting business cycles in context

The Business Cycle Unit of the South African Reserve Bank (SARB) determines the reference turning points in the South African business cycle in terms of the growth cycle of the business cycle. Growth cycles refer to fluctuations around the long-term growth trend of aggregate economic activity, also called trend-adjusted business cycles. The reference turning points of the business cycle distinguish between upward phases (or upswings) – where aggregate growth rate in economic activity either matches or exceeds its long-term growth trend – and downward phases (or downswings) – where aggregate economic activity either contracts or increases at a slower pace than its long-term growth trend. The growth cycle definition differs from the classical definition of the business cycle which looks at periods of absolute increases and contractions in aggregate economic activity[2].

The Business Cycle Unit has dated business cycle phases since the end of World War II and dates them according to the number of months that fall within each phase[3]. According to the Unit, South Africa has had 16 upswings since the post war period and also 16 downswings, including the current one, which started in

[1] A special thank you to Iaan Venter, David Fowkes and Witness Simbanegavi for their valuable inputs and comments

[2] Venter, J. C., Business cycles in South Africa from 2009 to 2013, Quarterly Bulletin, p. 102 – 112, March 2016, South African Reserve Bank

[3] SA's business cycle chronology are regularly published on page S-159 of the SARB Quarterly Bulletin

December 2013. Worryingly, the current downswing, with 77 months to May 2020[4] represents the longest downswing on record. The second longest downward phase on record is the March 1986 – May 1993 downswing, which comprised 51 months and which also represented a period of extreme political and economic turmoil for the country. Historically, downswings have on average lasted for about 20 months.

3. Analytical methodology

The analysis in this note will start from 1960, which corresponds with a period for which South Africa's national accounts data is available on a quarterly basis. For this reason, the business cycle phases will also be converted from months to quarters. For a quarter to fall within an upward or downward phase, it has to have at least two months that fell within that phase[5]. The analysis will be done up to the third quarter of 2019.

Figure 1: GDP performance during business cycle upswings since 1960s

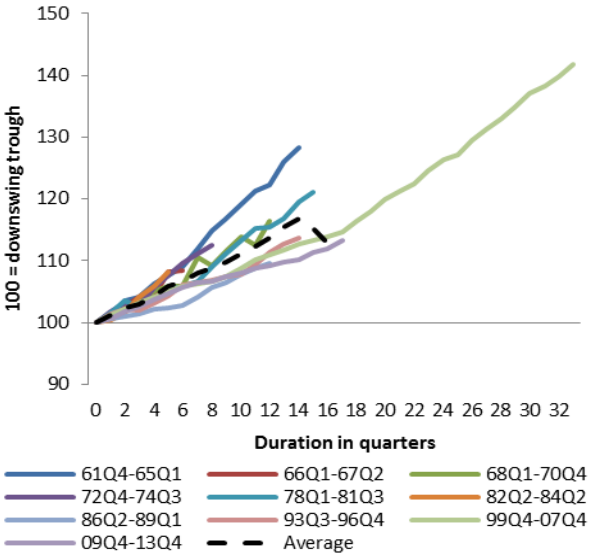
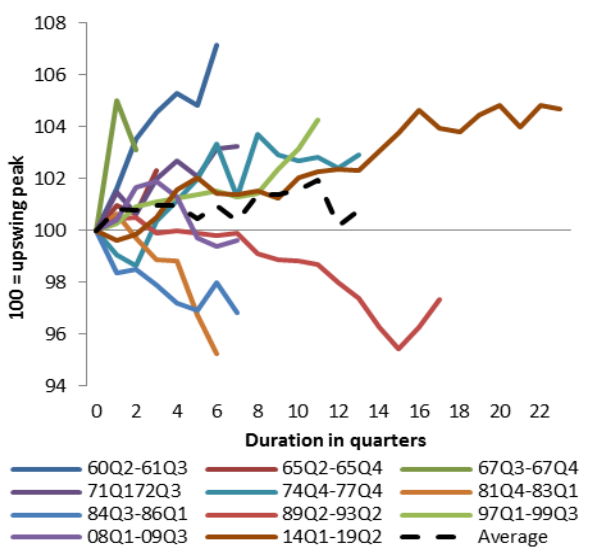


Figure 2: GDP performance during business cycle downswings since 1960s



Source: SARB

Figures 1 and 2 depict quarterly real GDP performance (seasonally adjusted and annualised)[6] during upswings and downswings since 1960, in order to illustrate the methodology used for the analysis. Each phase is indexed, where the base of each upswing represent the last quarter (or trough) of the downswing and where the base of each downswing represents the last quarter (or peak) of the upswing. There were 10 upswings and 11 downswings, including the current, since the 1960s.

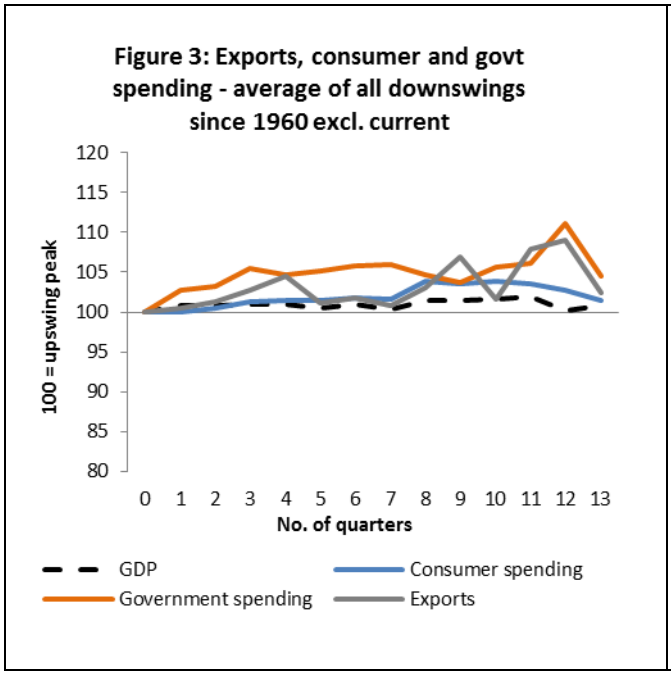
To explore how the current downswing compares with previous ones, this note analyses the behaviour of the different components of GDP during the current downswing relative to the average of all previous downswings and relative to overall GDP growth. Similarly, in order to determine how various components of GDP tend to behave during upswings, the note examines the average behaviour of GDP components during historic upswings relative to overall GDP growth. This methodology is similar to that used by the Bureau for

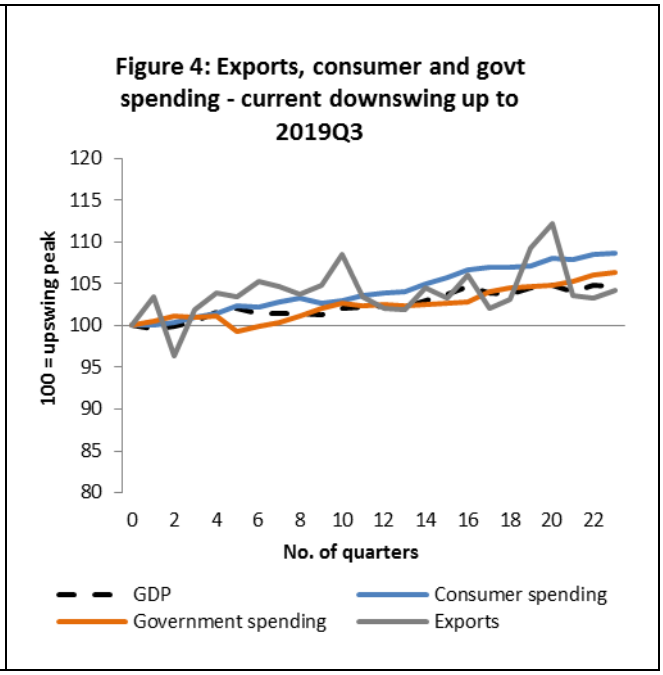
[4] This assumes the economy has not since entered an upswing, which is plausible given the COVID-19 shock.
[5] The methodology was recommended by the South African Reserve Bank's Business Cycle Unit
[6] All quarterly GDP components analysed in this note are constant, seasonally adjusted and annualised

Economic Research (BER)[7] and the SARB's Business Cycle Unit[8], both of which examine the components of GDP that tended to lead a recovery into the upward phase of the business cycle by examining their average performance during historic upswings. A similar methodology is also seen in a paper by the by the Reserve Bank of Australia, which compares the performance of durable goods consumption to spending on non-durable goods, services, machinery and equipment investment, and GDP by looking at their average performance during periods of economic weakness since the 1960s[9]. Appendix 1 and 2 depict the performance of GDP components during historic downswings and upswings, respectively, since the 1960s.

4. Salient features of the current downswing

It was noted earlier that the current downswing is by far the longest on record. When looked at on a quarterly basis, the current downswing entered its 23rd quarter during the third quarter of 2019, compared with an average of 8 quarters of all the other previous downswings dating back to 1960. To explore how the current downswing compares with previous ones, this note analyses the behaviour of the different components of GDP during the current downswing relative to the average of all previous downswings and relative to overall GDP growth. The average is limited to 13 quarters (roughly 3 years) from the start of the downswing, which is the last quarter for which there are values for at least two downward phases excluding the current phase.





Source: SARB

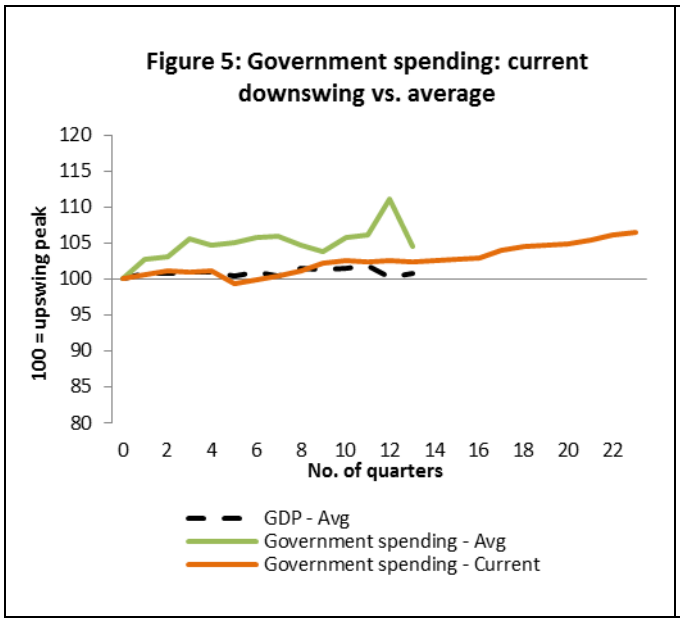
Figure 3 shows that on average, exports, consumer spending, and government spending tend to do relatively better during downswings, recording positive (albeit marginal) growth and outpacing GDP. Furthermore, government spending has, on average, tended to grow faster than exports and consumer spending, particularly during the first two years of the downswing. In this downswing, however, government spending

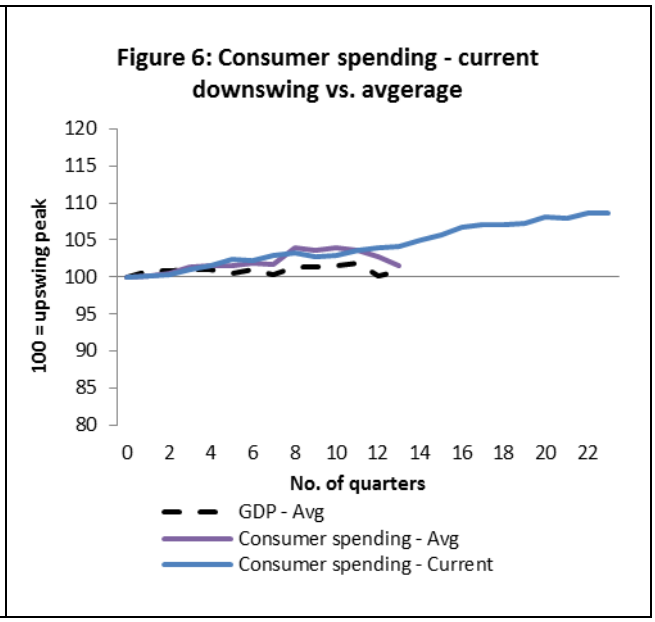
[7] The findings of this analysis was presented by Hugo Pienaar, BER Chief Economist, on 15 August 2019 at the annual BER Conference themed *"Searching for growth: A post-election policy and macroeconomic outlook"*

[8] Wolhuter, A., Bosch, A., and Venter, I. *"Which components of GDP drive the initial part of an upswing in the South African* economy", South African Reserve Bank, Economic Statistics Department Analytical Note 03/2019, December 2019

[9] Wolhuter, Black, S. and Cusbert, T. *"Durable Goods and the Business Cycle"*, Reserve Bank of Australia: Quarterly Bulletin. September 2010.

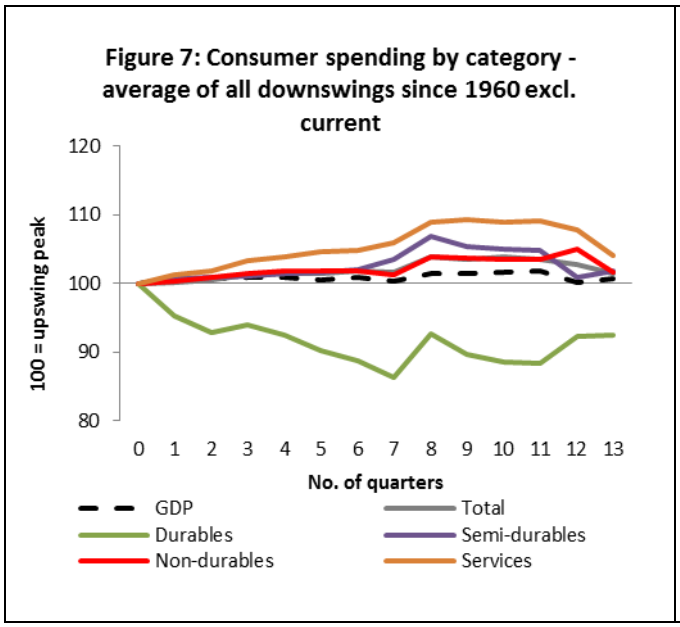
is weaker than consumer spending and exports, and is growing more or less in line with GDP (Figures 4 and 5).

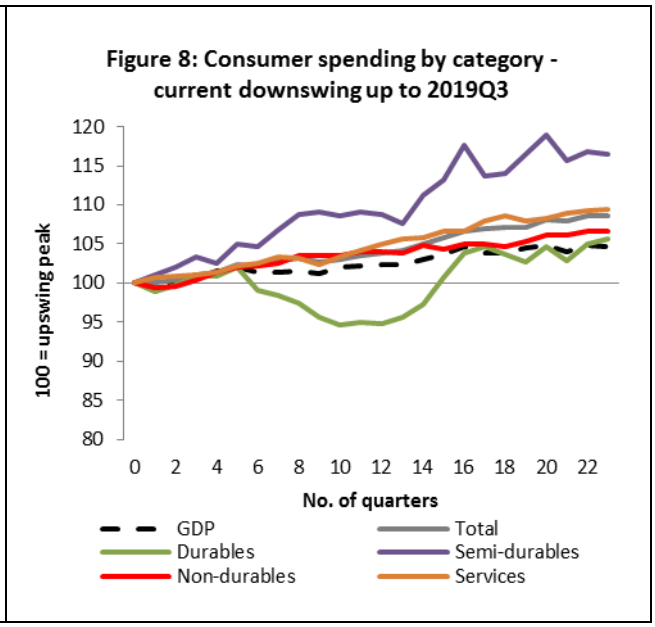




Source: SARB

Consumer spending in the current downswing has performed largely in line with previous downswings in the first three years (Figure 6). Household expenditure has since continued on a relatively strong upward trajectory, reaching levels around 10% above its starting point by the third quarter of 2019. However, although overall household spending in the current downswing has behaved similarly to its historical trend, there has been a shift in the performance of the various spending categories in the current phase relative to previous ones. Whereas services tend to do better than other categories and durables tend to fall more sharply during downswings, the current downswing has seen semi-durables performing better than other categories and displaying more buoyant growth while durables only started falling about a year into the downswing and have fallen less sharply (Figures 7 and 8).

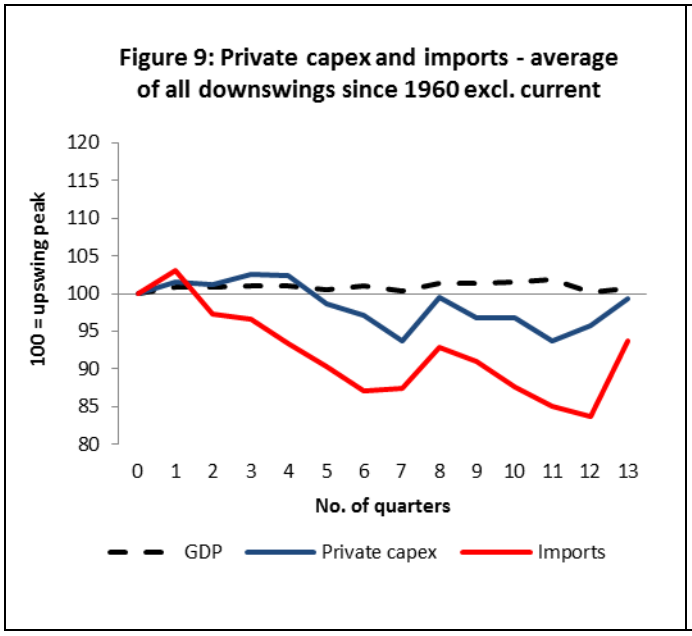


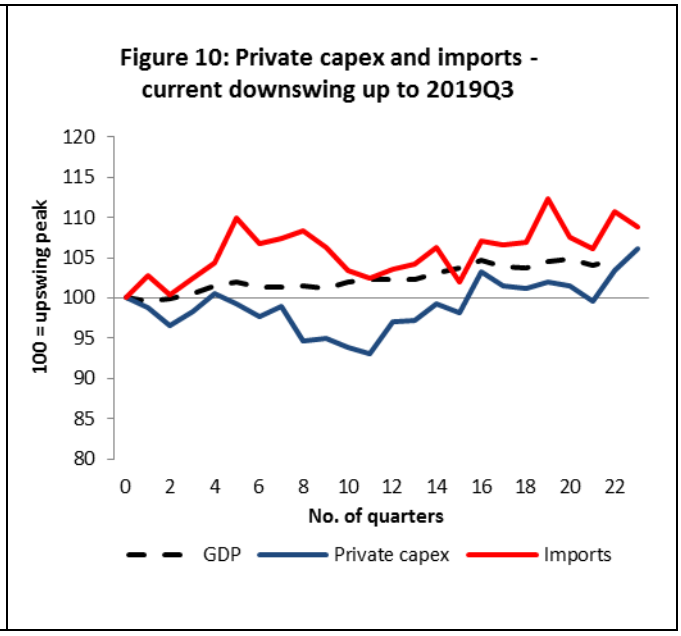


Source: SARB

The striking difference with the current downswing pertains to the behaviour of imports and public sector investment spending. Figure 9 shows that during downswings, imports collapse from the start of the downswing, falling by as much as 15%, on average, below their starting point and remaining about 5% below that point by the end of the downswing. Private sector investment spending displays similar performance as that of imports, but only starts to decline a year into the start of the downswing. The decline in private investment spending is also less pronounced than that of imports (at 7% below its starting point at its lowest), and it also recovers to its starting point level towards the end of the downswing.

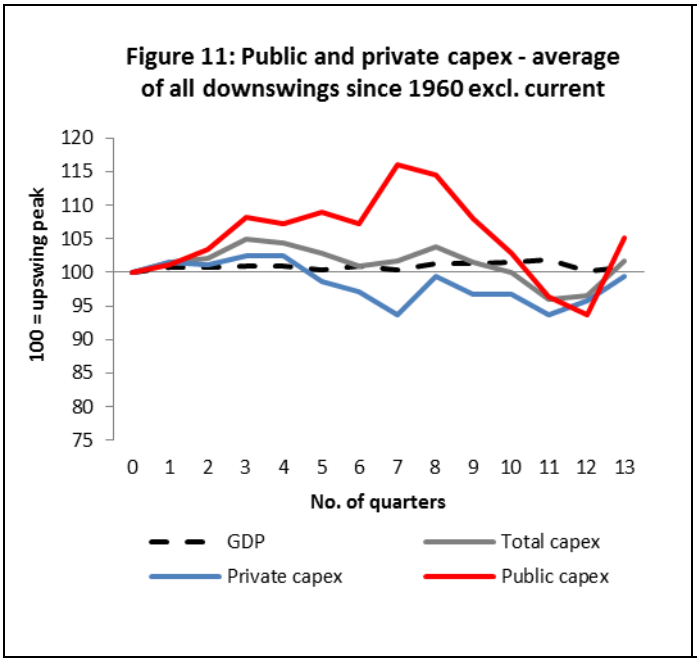
The significant difference with the current downswing is the relatively strong performance of imports, which have remained positive and above GDP growth throughout the period (see Figure 10). While imports tend to end the downswing close to 5% below the starting point, on average, in the current downswing they were almost 5% higher after three years (when most downswings are concluded) and about 10% above their starting point by the third quarter of 2019. The unusually strong growth in imports in the current downswing could possibly be explained by a combination of supply-side weakness (including electricity shortages and policy uncertainty) and relatively demand-supportive macroeconomic policies, which would be consistent with the growth in household consumption of durables and semi-durables discussed above. Additionally, import growth has been boosted by investment projects, including renewable energy projects.

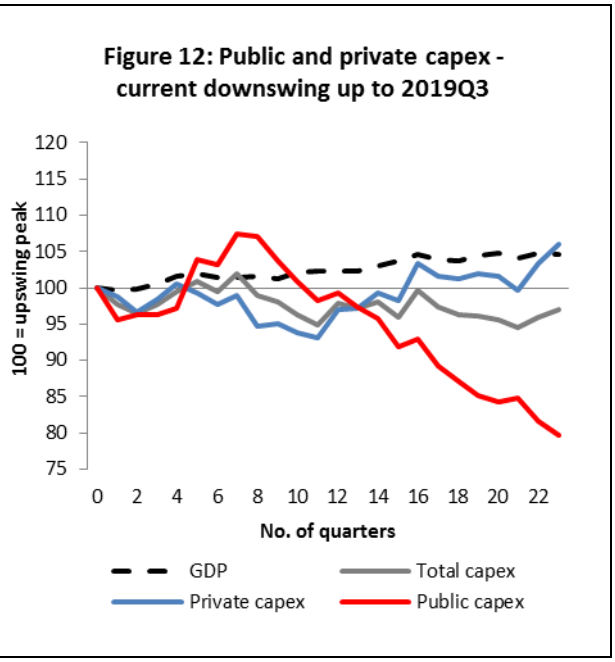




Source: SARB

Another salient characteristic of the current downswing, as noted above, relates to the performance of public sector investment spending, which comprises investment spending by general government and public corporations. Figure 11 shows that on average, public sector investment spending tends to increase in the first two years of the downswing and then slumps quite sharply, only posting a recovery during the last quarter of the downswing. Public sector investment spending displays a similar trend in current downswing – increasing during the first two years and then falling sharply. The stark difference however is that unlike in previous downswings where public investment spending recovered in the last quarter, it has continued to decline quite sharply during the current downswing (Figure 12). While public sector investment only falls about 5% below its starting point, on average, in the current downswing it has now fallen by almost 20% below its starting point (by the third quarter of 2019).





Source: SARB

The sharp decline in public investment spending is largely driven by a significant contraction in investment spending by public corporations. State-owned enterprises supported a rise in public sector investment spending after 2009, with spending primarily on transport and electricity generation sectors. The conclusion of some key projects as well as operational, governance and financial challenges in some key state-owned entities have contributed to the uncharacteristically prolonged and sharp decline in investment spending by these institutions in the current downswing.

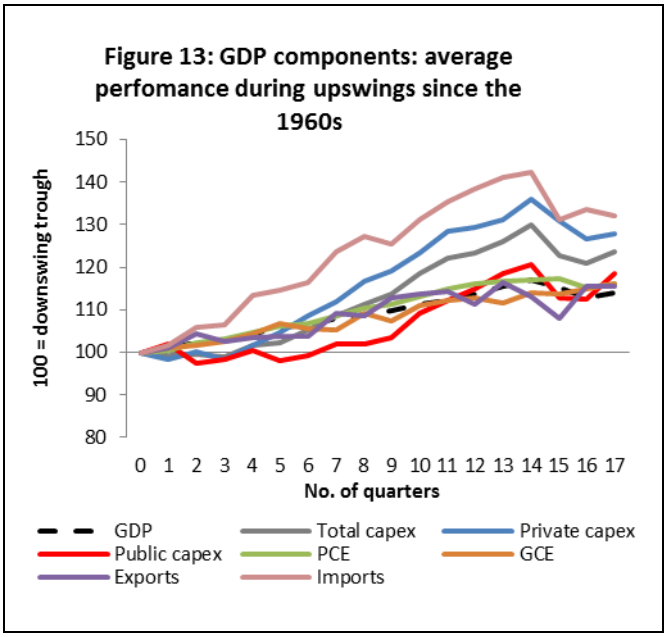
5. What are the early drivers of upswings?

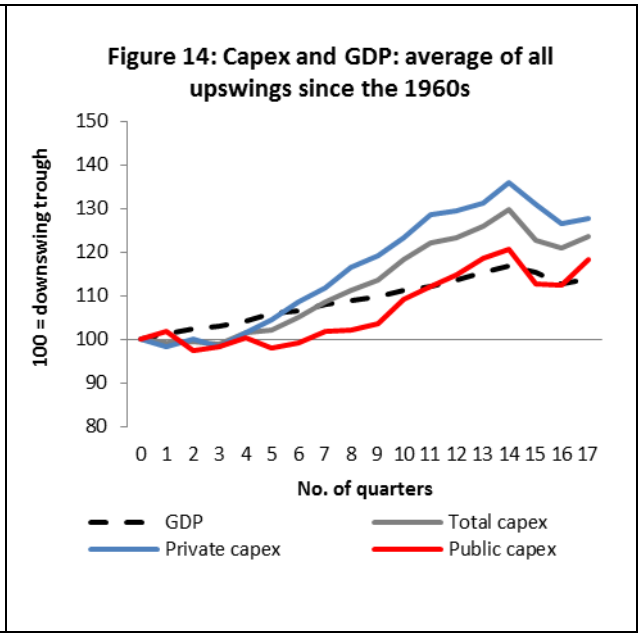
This section follows a similar method of analysis as above but focuses on the upward phase of the business cycle, in order to determine how various components of GDP tend to behave during upswings, particularly during the early stages[10]. The analysis of upswings is limited to 17 quarters (roughly 4 years) from the start of the upswing, which is also the last quarter for which there are values for at least two upswings. As was noted earlier, the Bureau for Economic Research (BER) and the SARB's Business Cycle Unit both performed similar analysis in 2019, looking at which components of GDP tended to lead a recovery into the upward phase of the business cycle. The findings of this analysis are contrasted with those of the BER and the Business Cycles Unit below.

Figure 13 shows that imports and private sector investment spending, which tend to decline quite sharply during downswings, are also the two components that expand most during upswings. Imports tend to grow strongly from the start of the upswing and significantly outpace all other GDP component, reaching an average high of about 42% above the starting point during the fourth year of the upswing. Private sector investment spending, on the other hand, tends to underperform GDP growth during the first year of the upswing, but gains significant traction thereafter, growing significantly faster than GDP and its other subcomponents, excluding imports, to peak 36% above its starting point. This is in line with the BER and the

[10] An interesting point to note regarding upswings is that the upswing preceding the 2008 Financial Crisis (from September 1999 to November 2007) was by far the longest in history, spanning 99 months (or just over 8 years). Historically, upswings have, on average, lasted just under 3 years (or 31 months). The upswing following the 2009 Great Recession was the second longest historically, which lasted just over 4 years (or 51 months). Analysed in quarters, the September 1999 to November 2007 upswing lasted 33 quarters, compared to an average of 14 quarters since 1960.

Business Cycle Unit analyses, which find that private sector investment spending tends to lag in early stages of the upswing and accelerates quite significantly thereafter.





Source: SARB

The analysis also shows that government and household expenditure tends to grow in line with GDP during the initial stages of the upswing, before moving marginally higher. This is consistent with the BER and the Business Cycle Unit's findings. Exports also generally track GDP, which is consistent with the Business Cycle Unit findings, but not the BER's argument that exports help drive upswings in their initial stages.

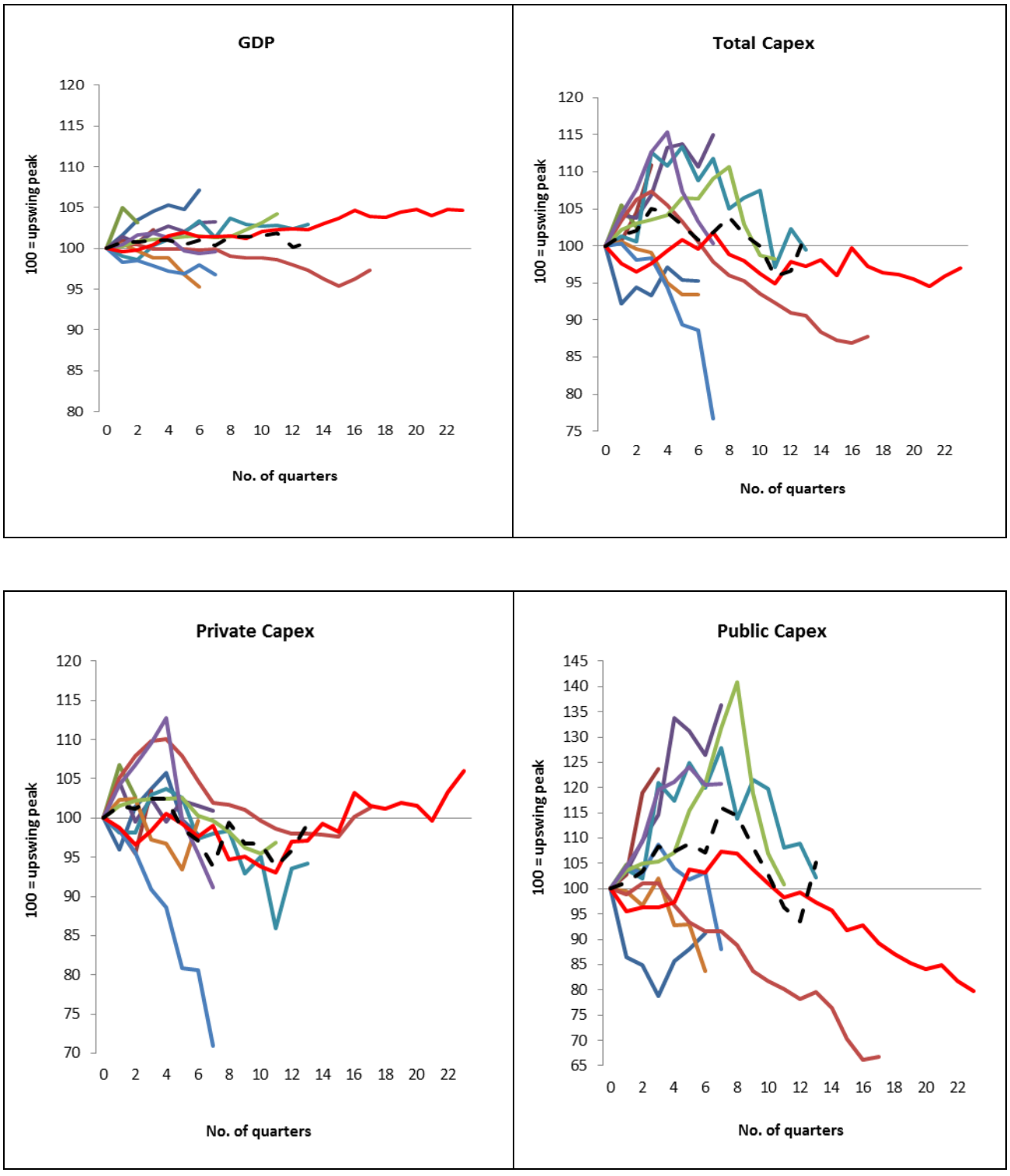
Public sector investment spending tends to underperform GDP for about three years into the upswing, barring for the first quarter of the upswing. In fact, public sector investment spending contracts (relative to its starting point) for about a year into the upswing, and continues to grow below GDP until the third year. The BER comes to a very similar conclusion on the performance of public sector investment spending. By contrast, the Business Cycle Unit finds public sector investment to be a driver of the initial stages of the business cycle upswing, but we are unable to replicate this finding.

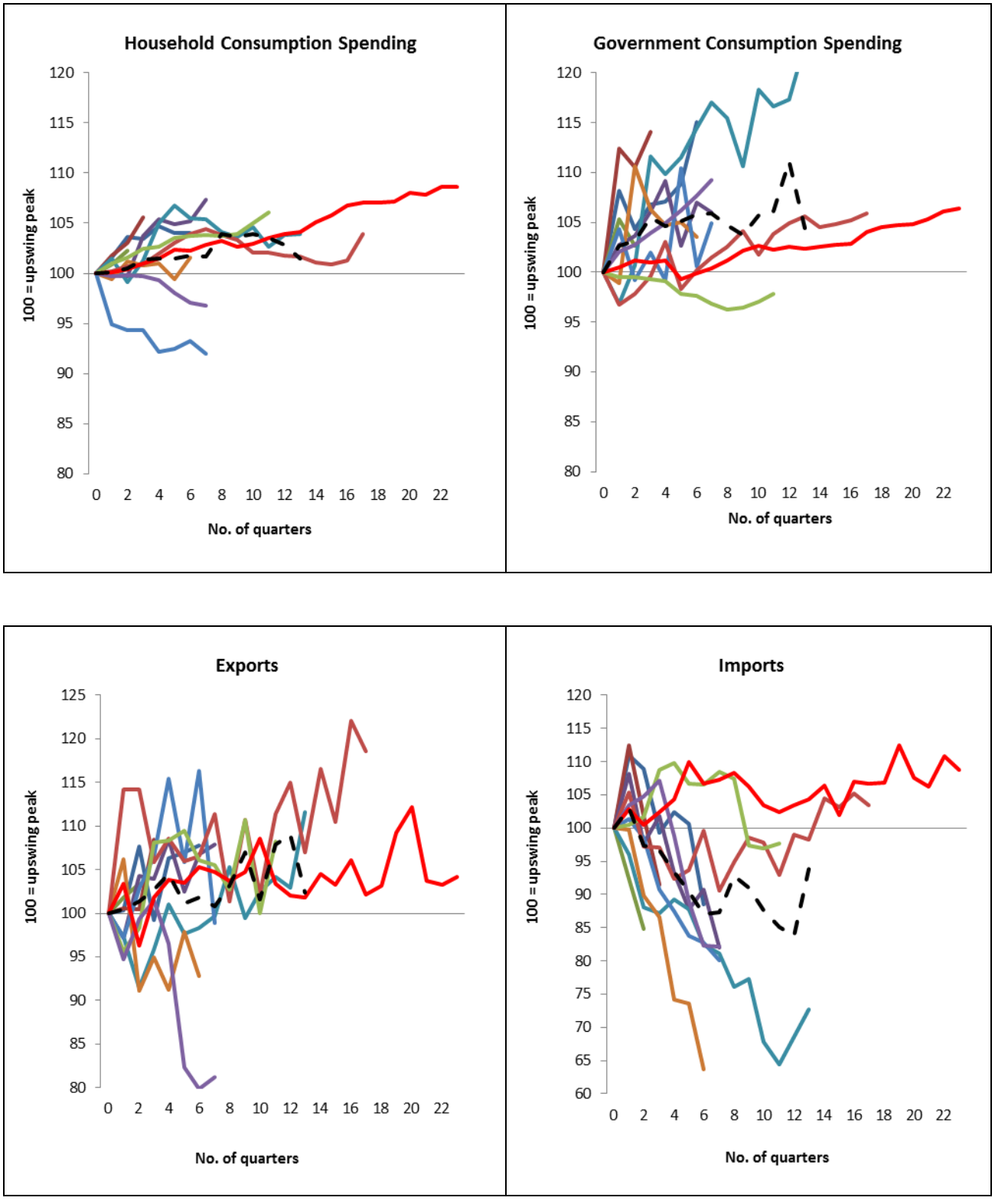
6. Conclusion

The current downswing has two unusual properties. Imports are unusually strong, relative to previous downswings, while the contraction in public sector investment spending has been more pronounced.

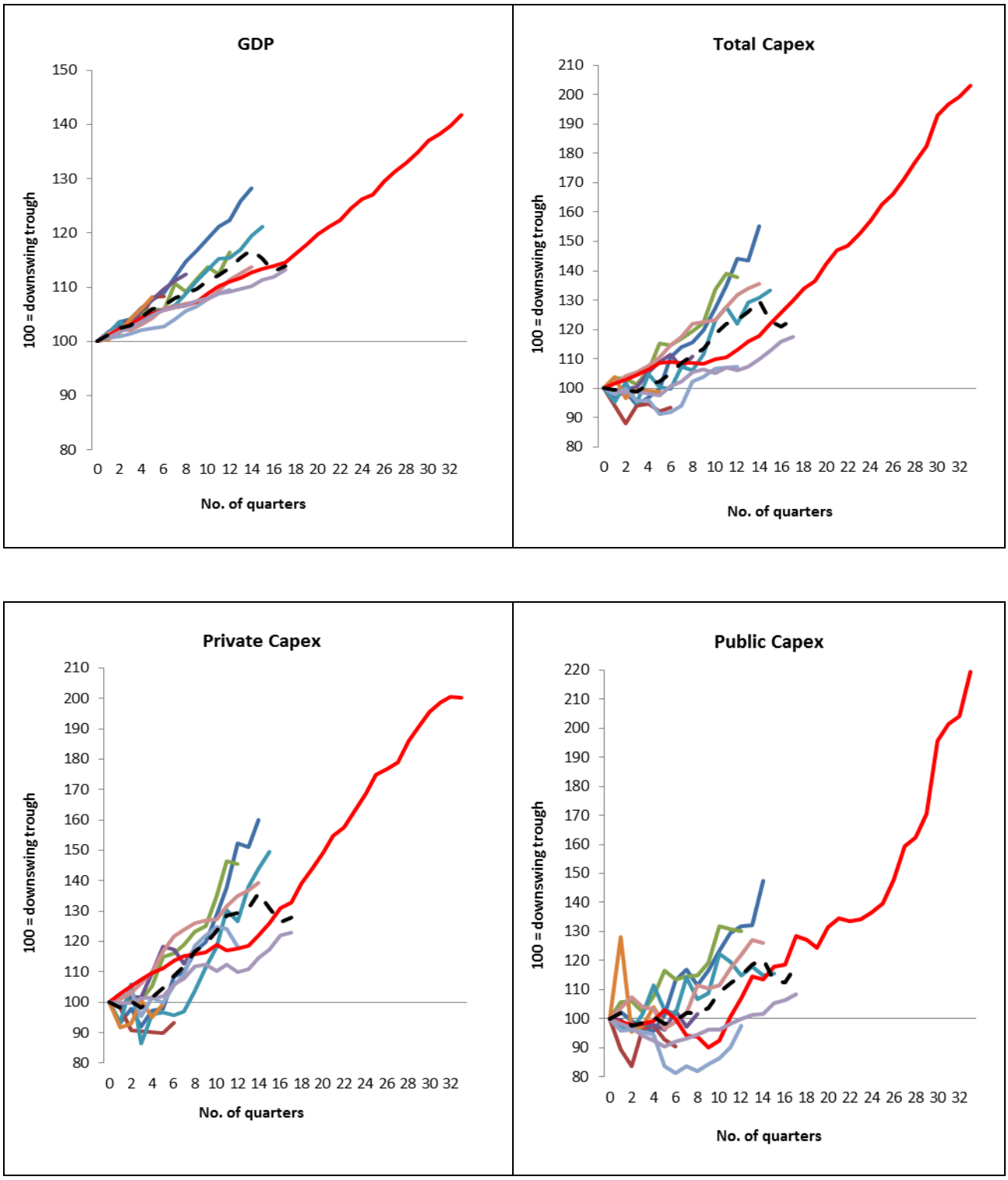
We also find that imports and private sector investment spending, which tend to contract sharply during downswings, are also the components that tend to expand the most during upswings. Imports tend grow strongly from the start of the upswing and significantly outpace all other GDP components, while private sector investment spending tends to underperform GDP growth during the first year of the upswing, before gaining traction subsequently.

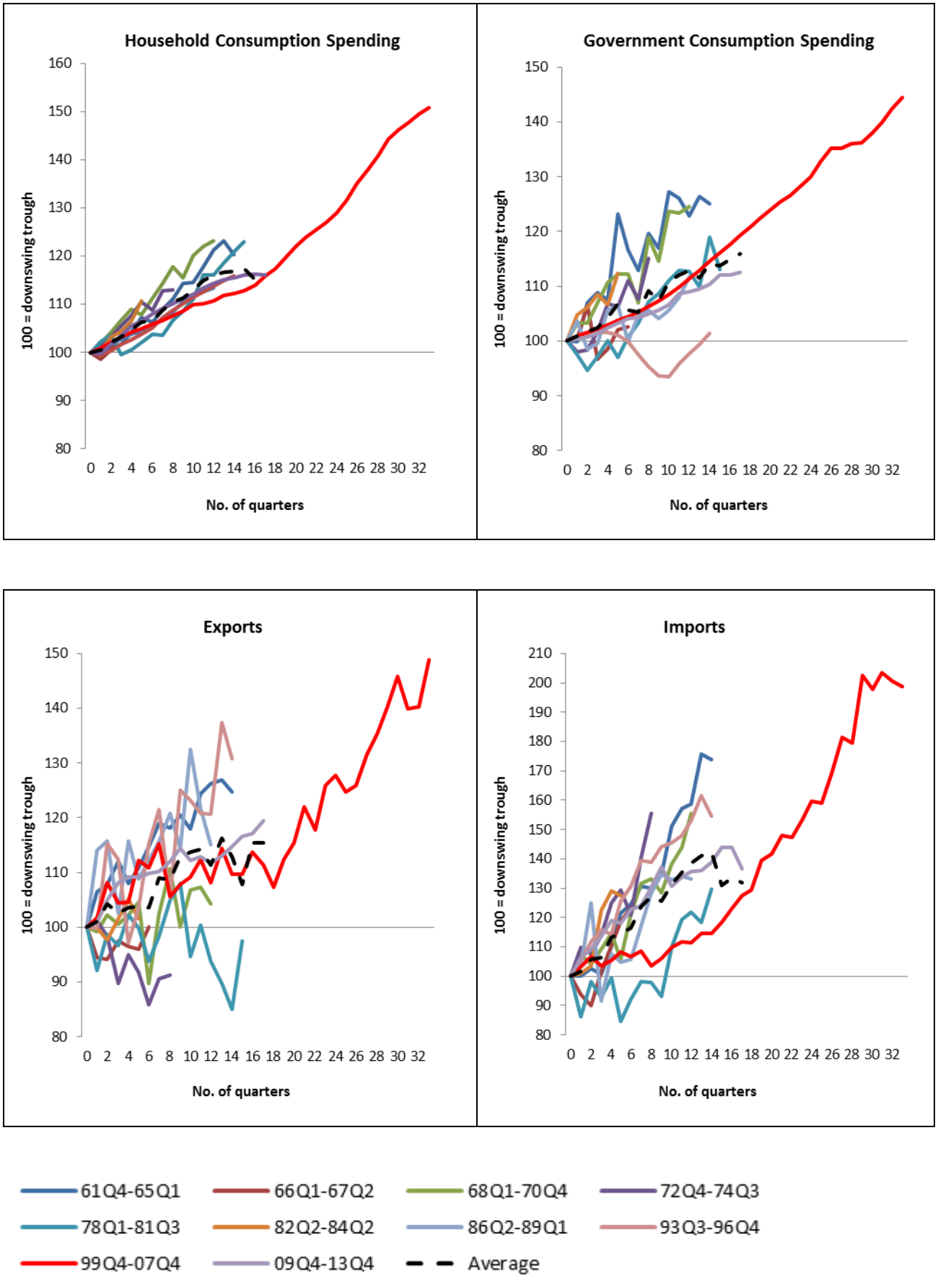
Appendix 1: GDP components during downswings since 1960




Household Consumption Spending
100 = upswing peak
No. of quarters
Government Consumption Spending
100 = upswing peak
No. of quarters
Exports
100 = upswing peak
No. of quarters
Imports
100 = upswing peak
No. of quarters
60Q2-61Q3
65Q2-65Q4
67Q3-67Q4
71Q172Q3
74Q4-77Q4
81Q4-83Q1
84Q3-86Q1
89Q2-93Q2
97Q1-99Q3
08Q1-09Q3
14Q1-19Q2
Avg (excl. current)

Appendix 2: GDP components during upswings since 1960




Household Consumption Spending
100 = downswing trough
No. of quarters
Government Consumption Spending
100 = downswing trough
No. of quarters
Exports
100 = downswing trough
No. of quarters
Imports
100 = downswing trough
No. of quarters
61Q4-65Q1
66Q1-67Q2
68Q1-70Q4
72Q4-74Q3
78Q1-81Q3
82Q2-84Q2
86Q2-89Q1
93Q3-96Q4
99Q4-07Q4
09Q4-13Q4
Average