

It is About Time to Resolve Nigeria's Monetary Policy Conundrums

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Abstract

The MPC Policy decisions have included easing just once in the last six years for the policy rate, and just twice in the last six years for the CRR. In contrast, the policy rate has been tightened ten times in the last six years, including twice during the recession in 2016, and the CRR has also been tightened ten times in the last six years, including once in 2016.

It is very puzzling that MPC finds extraneous reasons, typically about banks or foreign exchange supply, to tighten monetary policy, even when the economy is contracting and can do with some liquidity boost. We demonstrate that MPC decisions have been disconnected from economic realities, and urgent steps must be taken to ensure a reconnect. The economy is bigger and more important than the banks, but MPC statements continue to dwell on banks' conditions, indicative of lapses in banking supervision, rather than on economic conditions.

Failures of micro/macro-prudential policies are spilling over into the monetary policy space, inflicting high costs on the economy. What the UK government has done in reforming the Bank of England over the last two decades, especially in functionally separating responsibilities for monetary policy and micro/macro-prudential policies, is a good example of the reforms required in Nigeria's monetary policy and micro/macro-prudential policy arrangements.

Apart from banks conditions, MPC statements also had a lot to say about the need keep the policy rate high enough to attract foreign portfolio inflows, rather than ease rates to stimulate growth and investment, betraying another spill-over into the monetary policy space from weaknesses in the foreign exchange policies of the CBN. Nigeria's foreign investment policy must be recalibrated away from preoccupation with volatile and easily reversible portfolio inflows towards harder to reverse diaspora and foreign direct investment inflows.

We argue strongly for immediate reforms in Nigeria's monetary policy processes, Nigeria's banking supervision arrangements, and Nigeria's foreign investment policies. Those reforms are needed to ensure an orderly transition to a low MPR/low CRR regime that is urgently needed to boost growth and investment.

Contents

1. Making Sense of Historical Monetary Policy Decisions
 - a. Soludo Era
 - b. Lamido Era
 - c. Emefiele Era
2. Tightening monetary policy stance in a recession is very puzzling
3. It results from conflicts from laxity in banking supervision/prudential regulation
4. Monetary and micro/macro-prudential policies must be realigned
5. Policy rate does not have to be kept high or positive in real terms
6. Concerns about monetary policy considerations
7. Concerns about MPR
8. Concerns about CRR

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1. Making Sense of Historical Monetary Policy Decisions

The MPC Policy decisions have included easing just once¹ in the last six years for the policy rate, and just twice² in the last six years for the CRR³. In contrast, the policy rate has been tightened ten times in the last six years, including twice during the recession in 2016, and the CRR has also been tightened ten times in the last six years, including once in 2016.

It is very puzzling that the MPC finds extraneous reasons, typically relating to concerns about banks or foreign exchange supply, to tighten monetary policy, even when the economy is contracting and can do with liquidity boost. We demonstrate that MPC decisions have been disconnected from economic realities in the past six years, and urge that steps be taken to ensure a reconnect.

To make sense of the historical monetary policy decisions, we now compare the patterns in policy decisions across the Soludo, Lamido, and Emefiele regimes, and uncover significant and instructive differences across the regimes.

a. Soludo Era

		MPR	CRR		
			Unified	Private	Public Sector
	Jun-04				Withdrawal of N74.5 billion (75.6 %) of
2005	Jan-05	Reduced MRR from 15% to 13%	2-week maintenance period for CRR		
	Jun-05		CRR increased from 9.5 to 10 %		Withdrawal of N60 billion public sector deposit
	Nov-05				Withdrawal of NNPC deposits, sale of N60 billion CBN instrument
2006	Jun-06	Raised the MRR from 13% to 14%			
	Nov-06	Replaced MRR with MPR at 10%			
2007	Jun-07	Reduced MPR from 10.0 % to 8.0 %)			
	Oct-07	Raised MPR from 8.0 % to 9.0 %)			
	Dec-07	Raised MPR from 9.0 % to 9.5 %)			
2008	Apr-08	Raised MRR from 9.5% to 10%			
	Jun-08	Raised from 10% to 10.25			
	Sep-08	Reduced from 10.25% to 9.75%			
2009	Apr-09	Reduced from 9.75% to 8%			

¹ November 2015.

² July and November 2015.

³ The table in the appendix summarizes monetary policy decisions since June 2005. It includes only meetings at which tightening or easing decisions were taken on either the policy rate or CRR or both, that is, meetings in which all policy levers were unaltered were not included in the table.

Charles Chukwuma Soludo met the policy rate at 15 percent, raised it on five occasions and eased it on five occasions over his five-year tenure to leave it at 8 percent when he left. He met CRR at 9.5 percent, raised it to 10 percent the month he took over, but also withdrew 60 billion public sector deposits from the banks in the same month, and subsequently preferred the later approach to CRR, which he effectively abandoned, making more withdrawals in November of that year. He had cut CRR to 1 percent by the time he left. He cut policy rate from 15 percent to 8 percent, and cut CRR from 9.5 to 1 percent over his five-year term.

The strategy of withdrawing public sector deposits to mop up excess liquidity targeted the specific banks with excess liquidity problems, without putting any burden of increased CRR on banks that did not have the problem. Once the excess liquidity had been effectively mopped up, he was able to ease rates sustainably without any backlash, and market rates eased considerably for nearly one and a half years after he left, when his successor suddenly changed the strategy in September 2010 MPC meeting.

b. Lamido Era

Sanusi Lamido Sanusi met the MPR at 8 percent, eased to 6 percent it at his first MPC meeting in July 2009, the only time he eased, raised it to 6.25 percent fourteen months later in September 2009, and then raised at each the six meetings in 2011 to 12 percent by October, holding it at that level until he left. He met CRR at 1 percent, never eased it, but raised it on for occasions to 12 percent over an 18- month period from January 2011 to July 2012, he left it at that level on private deposits but raised the CRR on public sector deposits to 50 percent in July 2013, and 75 percent in September 2013, the raised the one on private deposits to 15 percent in November 2013, leaving the one on public sector deposits at 75 percent. Lamido raised the MPR from 6 percent to 12 percent, and raised the CRR from 1 percent to 15/75 percent in his time. He eased MPR once and raised it seven times. He never eased CRR, but raised it seven times.

		MPR	CRR		
			Unified	Private	Public
	Jul-09	Reduced from 8% to 6%			
2010	Sep-10	Raised from 6% to 6.25%			
2011	Jan-11	Raised from 6.25% to 6.5%	Raised from 1% to 2%		
	Mar-11	Raised from 6.5% to 7.5%	Raised from 2% to 4%		
	May-11	Raised from 7.5% to 8%	4%		
	Jul-11	Raised from 8% to 8.75%	4%		
	Sep-11	Raised from 8.75% to 9.25%	4%		
	Oct-11	Raised from 9.25% to 12%	8%		
2012	Jul-12		12%		
2013	Jul-13			12%	50%
	Sep-13			12%	75%
	Nov-13			15%	75%

Lamido shied away from confronting the individual banks with excess liquidity problem, preferring to hike both policy rate and CRR to ridiculous levels until he left. Banks without excess liquidity were forced to swallow the same CRR pills that should have been prescribed only for those banks with excess liquidity. Soludo's style of mopping up public deposits from banks with excess liquidity is indeed equivalent to a selective cash reserve requirement regime in which the hammer falls only on the banks that are likely to destabilize the system with excess liquidity. Some variants of that approach is needed to demolish the ostensible MPR and CRR burdens that Lamido had heaped on the Nigerian economy, which his successor is aggravating, and pave way for an orderly transition to a low MPR/CRR regime that is require to underpin a regime of low market interest rates and stronger liquidity support for real economic growth.

c. Emefiele Era

Godwin Emefiele met MPR at 12 percent when he took over in June 2014, raised it to 14 percent in November of that year, eased it to 11 percent a year later, the only time he eased, before raising it to 12 percent in March 2016, and raised it further to 14 percent in July 2015. He met a CRR regime of 12 percent on private deposits and 75 percent on public sector deposits, raise the one on private sector deposits to 20 percent in November 2014, maintaining 75 percent on public sector deposits, until he unified the two at 31 percent in May 2015, cut it to twenty five percent in July 2015, cut it further to 20 percent in November 2015, before raising it to 22.5 percent in March 2016. He has thus hiked policy rate thrice and eased it once, and hiked CRR thrice and eased it twice, to leave both levers tighter than he met them.

		MPR	CRR		
			Unified	Private	Public Sector
2014	Nov-14	Raised from 12% to 13%		20%	75%
2015	May-15		31%		
	Jul-15		25%		
	Sep-15		25%		
	Nov-15	Reduced from 13% to 11%	20%		
2016	Mar-16	Raised from 11% to 12%	22.50%		
	Jul-16	Raised from 12 % to 14%	22.50%		

Like Lamido, Emefiele has continued to shy away from confronting the individual banks with excess liquidity problem, preferring to hike both policy rate and CRR to ridiculous levels. Banks without excess liquidity are still being forced to swallow the same CRR pills that should be prescribed only for those banks with excess liquidity.

2. Tightening monetary policy stance in a recession is very puzzling⁴

While the CBN Act created the Monetary Policy Committee (MPC) with a dual mandate as follows: ‘facilitate the attainment of the objective of price stability and to support the economic policy of the Federal Government’, the MPC tends to wrongly claim the first of the two mandates as its primary mandate. There is a need for the MPC to pay more attention to the attention of the second mandate, especially now that the Federal Government is embarking on an urgent Economic Growth and Recovery Plan. To support economic growth and recovery, the MPC must ease its policy stance by cutting monetary policy rate in an orderly manner to such a low level that will provide much needed liquidity support for investment and sustained growth. Money is different from credit. Monetary ease is different from ease of credit. Monetary policy is first about money before it is about credit. Easy money will help economic recovery even if it does not translate to easy credit.

3. It results from conflicts from laxity in banking supervision/prudential regulation

One of the reasons given by the MPC for not easing its monetary stance was that, ‘in the past, the MPC had cut rates to achieve the above objectives; but found that rather than deploy the available liquidity to provide credit to agriculture and manufacturing sectors, the rate cuts provided opportunities for lending to traders who deployed the same liquidity in putting pressure on the foreign exchange market which had limited supply, thus pushing up the exchange rate.’⁵ This highlights tensions between monetary policy and micro/macro-prudential policies: the MPC is not

⁴ Two earlier attempts to highlight puzzling developments in the Central Bank of Nigeria are: Teriba, A. (2013), ‘Puzzles About Monetary Policy in Nigeria’, September 1, 2013. <https://ssrn.com/abstract=2442602>; and, Teriba, A. (2014), ‘Recent Changes of Guards at the Central Bank of Nigeria’, June 5, 2014. <https://ssrn.com/abstract=2446591>.

⁵ See MPC Communique No. 108 of July 2016.

easing policy because banks' choices in response to policy easing may destabilize the economy. This MPC statement also confirms lapses in micro/macro-prudential policies: there are no supervisory/regulatory arrangements in place to ensure that banks' responses to policy easing will not destabilize the forex market. Nigeria thus faces a situation in which the MPC will be unable to fulfil the second part of its dual mandate so long as banking supervision/regulatory arrangements remain lax. Stronger supervisory regimes in the central bank in the past would promptly mop up excess liquidity in the specific banks that have it, either by issuing stabilization securities or moving Federal Government deposits out of such banks into the central bank coffers, and go on to ease monetary policies for the sake of overall economic growth and stability. Banking supervision should not weaken to the point that the central bank gives excuses on behalf the same banks it is supposed to supervise.

4. Monetary and micro/macro-prudential policies must be realigned

The **CBN Act of 2007** rightly created the Monetary Policy Committee (MPC) in **Section 12** and the Financial Services Regulatory Committee (FSRCC) in **Section 43** to address different aspects of macroeconomic policy concerns. While the MPC has actively and transparently engaged its monetary policy mandate through six meetings a year, the FSRCC has been dormant and opaque, with the consequence that its errors of omission in the micro/macro-prudential policy space have spilled over into the monetary policy space and are now creating tensions in the pursuit of the growth and recovery objectives of monetary policy.

Both committees are chaired by the Governor of the Central Bank, but while the MPC includes all the four Deputy Governors of the CBN and two other Members of the CBN Board, the FSRCC includes only the CBN Governor. While the membership of the MPC gives no room for any other institution to be represented apart from the CBN, the FSRCC membership includes representations from five other institutions, viz: Nigerian Deposit Insurance Corporation (NDIC), Securities and Exchange Commission (SEC), National Insurance Commission (NAICOM), Corporate Affairs Commission (CAC) and the Federal Ministry of Finance (FMF). The MPC includes three individuals to be appointed by the President, and two individuals to be appointed by the CBN Governor, who are selected for their expertise in economic analysis, the FSRCC does not include any individual appointee.

The search for realignment between monetary policy and micro/macro-prudential policies in England initially led to the creation of a Financial Services Authority (FSA), and eventually spitting its responsibilities between two new agencies: the Financial Conduct Authority (FCA) and the Prudential Regulation Authority (PRA) of the Bank of England. The PRA is the UK's prudential regulator for banks, insurers and major investment firms, and is chaired by the Governor of the Bank of England. Four members of the Board are Bank staff, including The Governor and three Deputy Governors. Independent external members have a majority on the PRA Board, including the Chief Executive of the Financial Conduct Authority and six others selected for their experience and expertise in financial services. Nigeria may need to strengthen the supervisory component of the FSRCC mandate along the lines of the UK FRA.

5. Policy rate does not have to be kept high or positive in real terms

High interest rate environment orchestrated by high level of the monetary policy rate is hurtful to investment and growth.

The MPC in putting forward for tightening considered the high inflationary trend which has culminated into negative real interest rates in the economy; noting that this was discouraging to savings. Members also noted that the negative real interest rates did not support the recent flexible foreign exchange

market as foreign investors attitude had remained lukewarm, showing unwillingness in bringing in new capital under the circumstance. Members further noted that there existed a substantial amount of international capital in negative yielding investments globally and Nigeria stood a chance of attracting such investments with sound macroeconomic policies. Consequently, members were of the view that an upward adjustment in interest rates would strongly signal not only the Bank's commitment to price stability but also its desire to gradually achieve positive real interest rates. Such a decision, it was argued, gives impetus for improving the liquidity of the foreign exchange market and the urgent need to deepen the market to ensure self-sustainability.⁶

Evaluating the above quotation from MPC Communique No. 108 of July 2016, it is necessary to make the following clarifications:

- i. The argument by the MPC that the policy rate must be kept high to ensure a positive real rate and encourage savings is rather hollow and distracting from the objectives of the MPC because there are many other rates in the market that should be used to attract and reward savers with positive real returns.
- ii. Monetary policy rates in some leading economies are currently negative, zero or slightly above zero, and well below the rate of inflation. This has not precluded the existence of much higher rates that continue to attract savings in those markets and offer positive real returns.
- iii. In any case, why would anyone be trying to encourage savings rather than encourage investment in a recession? The two require diametrically opposite policy stances, there is a current challenge of getting the MPC to adopt a policy stance that is supportive of increased investment for economic recovery and growth in the short term.
- iv. The gesture gets more speculative when the savings in question is foreign portfolio inflows. The MPC 'feels that there was the need to continue to encourage the inflow of foreign capital into the economy by continuing to put in place incentives to gain the confidence of players in this segment of the foreign exchange market.'⁷ Sacrificing economic recovery and growth for reversible portfolio inflows that may never arrive is too much costs on the economy, the policy stance should be eased to give growth a chance.
- v. Nigeria's foreign investment policy must be recalibrated away from preoccupation with volatile and easily reversible portfolio inflows towards harder to reverse diaspora and foreign direct investment inflows⁸.

6. Concerns about monetary policy considerations

- i. Economic recovery should currently be the overriding consideration for monetary policy, and the MPC should set a threshold for GDP growth.
- ii. Inflation should currently not be a consideration for monetary policy decision because it is cost-pushed, and would taper off by itself. Cost push inflation are transitory. It is the demand-pulled inflation that are persistent. As such, it is only demand-pulled inflation that call for policy tightening. The MPC has acknowledged the benign outlook of inflation in the medium term, this should provide a basis for doing more for the economic recovery objective.
- iii. Ensuring that the policy rate is positive in real terms to attract savings should never be a consideration for setting monetary policy rate (MPR) because the MPR is an overnight rate that should define the intercept of the upward sloping yield curve. It is some of the longer maturity interest rates along the yield curve that should be higher than the *expected inflation*

⁶ See MPC Communique No. 108 of July 2016.

⁷ See MPC Communique No. 108 of July 2016.

⁸ For a discussion of the steps Nigeria must take to stabilize foreign investment inflows is provided in Teriba, Ayo, (2017), 'Nigeria's Economic Outlook in 2017', March. <https://ssrn.com/abstract=2939899>.

*rate*⁹ to deliver positive real interest rates to savers, but short maturity rates like the MPR should not be expected to be higher than the expected inflation rates. Other countries' experiences currently show that it is not even necessary for the policy rate to be positive at all, much less positive in real terms.

- iv. FPI inflows should not be a consideration for monetary policy. MPC should leave private banks, bond and equity traders to attract FPI and concentrate on using MPR to regulate liquidity and provide support for growth.

7. Concerns about MPR

- i. MPC needs to ease the MPR considerably but in an orderly manner to pave way for the low interest rate environment required for rapid economic recovery and growth.
- ii. MPC should indeed adopt an economic growth threshold for hiking rates.

MPR Benchmarks¹⁰

- i. The Monetary Policy Rate is *negative* in Sweden, and Switzerland.
- ii. It is *zero* in European Monetary Union (EMU) and Japan.
- iii. It is *close to zero* in the UK, US, Denmark and other developed markets.
- iv. It is *considerably higher than zero* in BRICS (Brazil, 14%, Russia, 10%, India, 6.25%, China, 4.25%, South Africa, 7%) and MINT (Malaysia, 3%, Indonesia, 6.5%, Nigeria, 14% Turkey, 7.5%). Nigeria and Brazil have the highest policy rates across the developed countries, BRICS and MINT.
- v. Inflation rate is twice or thrice as large as the policy rate in many developed markets, but well below the policy rate across BRICS and MINT.

8. Concerns about CRR

- i. There is an urgent need to ease CRR and keep it low.
- ii. CRR was a mere 1% in Nigeria in 2009, before the MPC began to raise it since September 2010. It should be reiterated that prior to 2010, excess liquidity concerns were addressed by withdrawing Federal Government funds from the banks with such excess liquidity. Such interventions were bank-specific, and therefore more efficient than the practice of asking all banks to observe the same CRR, even when some of the banks have no excess liquidity. CRR should only be selectively observed by the individual banks with excess liquidity.
- iii. CRR now seems to have replaced micro-prudential and macro-prudential policies, at great costs to the economic growth objectives of monetary policies.

CRR Benchmarks^{11,12}

- i. *Countries with 0% cash reserve requirements:* Canada, UK, New Zealand, Australia, and Sweden all have 0% cash reserve requirements;
- ii. *Countries with non-variable reserve requirement:* Eurozone 1%, Slovakia, 2%, Switzerland, 2.5%
- iii. *Countries with variable cash reserve requirements:* US maintains 0%, 3% or 10%, Czech Republic and Iceland 0% or 2%, Poland 0% or 3.5%, Hungary 0% or 5%, Japan 0.05% to 5%, Turkey 6% or 11%, Korea 1% to 5%

⁹ Not the historical inflation rate that the MPC erroneously continues to relate policy rate to in its communiques.

¹⁰ List of countries by central bank interest rates, Wikipedia

¹¹ O'Brien, Yueh-Yun C. (2007), **Reserve requirement systems in OECD countries**. Finance and Economics Discussion Series No. 2007-54, Divisions of Research & Statistics and Monetary Affairs Federal Reserve Board, Washington, D.C.

¹² Reserve Requirements, *Wikipedia*

Summary/Outline of Monetary the Policy Conundrums

a. Lessons from historical decisions

- i. MPC is most likely hold ...
- ii. ... more likely to tighten ...
- iii. ... and most unlikely to ease!

b. Challenges

- i. Monetary policy must be made more supportive of economic recovery and growth
- ii. Micro/macro-prudential spillovers into monetary policy considerations must be curbed
- iii. Predictable and transparent framework for micro/macro-prudential supervision needed
- iv. Foreign Exchange management spillovers into monetary policy must be curtailed

c. Distractions

- i. Tension between monetary policy and micro/macro-prudential policies
- ii. Not easing policy because banks' choices may destabilize economy
- iii. MPC communicate confirms micro/macro-prudential policy lapses
- iv. Arrangements to ensure policy ease will not destabilize forex market needed

d. Realignment

- i. MPC engages its mandate regularly and transparently, with too much on its plate
- ii. FSRCC needs to be made active, more transparent, with enough on its plate

e. Decisions

- i. Monetary policy decisions should henceforth concentrate exclusively on the MPR
- ii. CRR should no longer be discretionary, but set as rules by FSRCC, not MPC

f. Considerations

- i. Growth and price stability outlook, and tradeoffs between them should dominate MPC considerations
- ii. Financial stability and threats of banks' actions should be addressed in parallel by the FSRCC, or a reformed FSRCC, not MPC

g. Instruments

- i. MPR should remain the exclusive discretionary prerogative of the MPC
- ii. CRR should be a non-discretionary, rule-based, instrument of the FSRCC

Historical Policy decisions: Why has Nigeria's MPC more often tightened than eased policy?

		MPR	CRR		
			Unified	Private	Public Sector
Soludo Era					
	Jun-04				Withdrawal of N74.5 billion (75.6 %) of
2005	Jan-05	Reduced MRR from 15% to 13%	2-week maintenance period for CRR		
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Lamido Era					
	Jul-09	Reduced from 8% to 6%			
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	May-11	Raised from 7.5% to 8%	4%		
	Jul-11	Raised from 8% to 8.75%	4%		
	Sep-11	Raised from 8.75% to 9.25%	4%		
	Oct-11	Raised from 9.25% to 12%	8%		
2012	Jul-12		12%		
2013	Jul-13			12%	50%
	Sep-13			12%	75%
	Nov-13			15%	75%
Emefiele Era					
2014	Nov-14	Raised from 12% to 13%		20%	75%
2015	May-15		31%		
	Jul-15		25%		
	Sep-15		25%		
	Nov-15	Reduced from 13% to 11%	20%		
2016	Mar-16	Raised from 11% to 12%	22.50%		
	Jul-16	Raised from 12 % to 14%	22.50%		

Sources: Central Bank of Nigeria, Annual Report and Statement of Accounts, various issues, and 'MPC Decisions', available at: <http://www.cbn.gov.ng/MonetaryPolicy/decisions.asp>.

Green is for easing (only five in the last 10 years, but just once in the last six years for the policy rate, and just twice in the last six years for the CRR), Red is for tightening (as much as fourteen in the last ten years, ten times in the last six years for the policy rate, and ten times in the last six years for the CRR). The table includes only meetings in which a tightening or easing decisions were taken on either the policy rate or CRR or both, that is, meetings in which all policy levers were unaltered were excluded from this table.

AYODELE OLALEKAN TERIBA

Ayo is the *CEO* of *Economic Associates (EA)* where he provides strategic direction for ongoing research and consulting on the outlook of the Nigerian economy, focusing on: global, national, regional, state, and sector issues. He was a *Member* of the *National Economic Intelligence Committee (NEIC)*, April 2009 to April 2012, where he conducted periodic reality checks on macroeconomic, fiscal and monetary developments in Nigeria.



He is well known for articulating his views on Nigeria's economic policy imperatives through articles, interviews and comments in the mass media. From 1996 to 1998, he spearheaded the advocacy for re-denomination of Naira notes and coins that led to the successful introduction of N100, N200, N500 and N1000 between 1999 and 2005. N50 note was the highest denomination prior to the advocacy.

His current advocacy research is on what could be done to ensure democratic effectiveness in achieving desirable economic outcomes in Nigeria; how Nigeria can take necessary steps to open foreign investment inflow, and engage the world about investment opportunities in the country; and, the Nigeria's economic, fiscal and financial federalism can be reconfigured to strengthen the States.

Before becoming the CEO of EA in 2004, Ayo worked as Chief Economist and Member of Editorial Board at ThisDay Newspaper Group (2001-2004), Faculty Member at the Lagos Business School (1995-2001), Head of Research at the Lagos Chamber of Commerce (1993-1995), and Company Economist at UAC of Nigeria (1992-1993). He has served as Consultant to many blue-chip companies, Federal Ministry of Information, Senate Committee on Banking and Finance, several State Governments, DfID, USAID, UNIDO, World Bank, and was a Visiting Scholar to the IMF Research Department in Washington DC.

He has received grants from Ford Foundation and Rockefeller Foundation, and chaired the steering committee of Money, Macroeconomic and Finance Research Group of Money Market Association of Nigeria. He is a Council Member and Chair of Economic and Statistics Committee of Lagos Chamber of Commerce and Industry, and a Non-Executive Director of Greenwich Trust Group.

His research output has included an annual economic, fiscal and sectoral report on the 36 States & the FCT, plus numerous scholarly publications resulting from his doctoral thesis, research grants, policy advocacy, and consultancy projects. Some of these are available at <http://ssrn.com/author=358232>.

Ayo earned B.Sc. in Economics from the University of Ibadan with Sir James Robertson Prize and Medal, UAC Prize in Economics, and Economics Departmental Prize as the all-round best economics graduate in 1988, M. Sc. Economics from Ibadan in 1990, M. Phil. Economics of Developing Countries as a Cambridge-DfID Scholar at the University of Cambridge in 1992, and Ph.D. in Applied Econometrics and Monetary Economics from the University of Durham in 2003. He is an Alumnus of the Lagos Business School (AMP 5).