Monzo, N26 & Co: Challenger Banks and Their Challenging Business Model

By Chris Rauch, Co-Founder & Partner of Grove House Ratings

Today, I wanna talk about one of the core features of a bank's business model, and how this feature benefits an economy. This feature is liquidity creation. And when I say 'benefits an economy', what I mean is how it benefits all of us, including you reading this and me writing it. All of us, really, on a very personal level: our wallets. I wanna make the case that modern banks (all the folks in Canary Wharf and on the 'High Street', the J.P. Morgans, Barclays', HSBCs or Santanders of the world) are paramount to a smoothly functioning economy, making life easier, cheaper and therefore better for all of us. And I wanna explain how these benefits can only be generated if banks are who they are: large institutions with various areas of business, serving both retail and institutional clients.

Why is this important and why am I emphasizing the size and variety in banks' business models and how they relate to economic welfare? The reason is that recent years have seen a surge in so called 'Challenger Banks' or 'Neobanks'. You might have read about them in the press: the most prominent 'Challengers' are Monzo, N26, Starling, Tandem, Loot or Atom (see the table below for a more comprehensive list). These are mostly very small and young institutions, some of which don't have fully functioning operations or clients yet. Although labeled 'banks', in my opinion they would be better described as 'monoline financial service providers'. They set out to provide their customers with a very limited number of financial services, most of which revolve around a current (checkings) account. As you can see from the table below, the product range starts with a simple checkings account and extends to affiliated services, such as bank (prepaid/debit-) cards, overdrafts, and a bunch of support tools. All of these banks are fully app-based without any brick-and-mortar branches, and lots of their appeal stems from great app usability and 'cool' features such as real-time account updates, savings/spending plans, push notifications, or account safety tools. Most importantly, lending is not (yet) part of these banks' business model.

The hype surrounding these institutions is quite remarkable. The press and Twitter-verse hails them as the 'future of banking', the red Monzo card has become quite the status symbol in Shoreditch, and staggering growth in customer numbers or waiting lists across all institutions is regarded as a threat to old 'established' banking. It seems as if there's a buzz of highly welcome disruption, and of people wishing them to be the new and cooler NatWests or Lloyds'. And, granted, their marketing works. I do see the appeal of a bank advertising itself with 'extensive use of emojis' (Monzo) or offering drone delivery of your debit card (Starling). However, here's what's troubling: their business model is not banking, and it should not be regarded as such. For crying out loud, you might say, they are just a bunch of Start-Ups – why would it be troubling! And that's true. However, the eight 'hottest' Challenger banks have raised a combined $353mn. in funding over the past three years and have an estimated 250,000+ users. Additionally, five of the eight Challengers have obtained bank licenses from their respective governing bodies, most recently Monzo and N26 (N26 in July 2016, Monzo in August 2016).

In short: they are a force to be reckoned with. Especially since all of this happened on the back of Beta versions or a yet to be fully developed product range.

I'm a huge fan of all things FinTech, so I congratulate them on these achievements. However, I do believe it is wrong to regard any of the aforementioned institutions as a bank and treat them in the same vein as Barclays or Lloyds. Furthermore, I do not believe we should be rooting for them to becoming the new and cooler Barclays or Lloyds, at least not with their given business models. The reason is simple: Banks perform a vital function for an economy that goes beyond offering checkings accounts and overdrafts: they create welfare for an economy by creating liquidity. Banks collect and store customer money and lend it back out again. In order to make this happen, banks need to center their core business around accepting deposits and originating loans. And challenger banks only focus on the former part, the deposit side of the business. And instead of lending it back out, they hold the deposited money in cash, use a tiny fraction to fund account overdrafts or invest it in highly liquid government bonds. Tide, a challenger bank focusing on account services for SMEs, sum it up best when they say on their website:

*["**We're not a bank – we're better.** Unlike a bank, Tide will never invest, lend or take risks with your money. We keep it in a separate, ring-fenced Barclays account – it will be there for you whenever you want it."]*

And not only is this business model not banking, it can also be detrimental to economic welfare. To explain my point of view, let me first talk about bank liquidity creation, and then link it to challenger banks' business models and their welfare contribution.

Table 1: Overview of 'Challenger' Banks in Europe

Name	Founded	Bank License?	Total Funding ($mn.)	Most recent funding (in $mn.)	HQ
N26	2013	Yes (07/2016)	52.7	40, Series B (06/2016)	Berlin, GER
Tandem	2013	Yes (11/2015)	34.8	3.05, Crowdfunding (05/2016)	London, UK
Atom	2014	Yes (06/2015)	166.34	GBP82, (11/2015)	Durham, UK
Monzo	2015	Yes (08/2016)	17.7	5.9, Venture Round (10/2016)	London, UK
Starling	2014	Yes (07/2016)	70	70, Venture (01/2016)	London, UK
Loot	2014	No	5.3	3.1, Venture Round (11/2016)	London, UK
LunarWay	2015	No	4.44	4.44, Venture Round (12/2016)	Aarhus, DAN
Tide	2016	No	2	2, Seed (07/2016)	London, UK

(Other challenger banks omitted from this list are Holvi (Finland), Fidor (Germany), Seed.co. (US) and Simple (US))

Table 2: Overview of 'Challenger' Banks' Business Models and Products

Name	Core Services	Ancillary services	Lending?	No of Customers
N26	Current account and MasterCard (Debit)	Savings tool, money transfer, withdrawals	Account overdrafts only (€ 2k limit)	>200k (06/2016)
Tandem	Current account	Money mgmt. tools, savings tools	Credit cards, loans (1)	9,168 (01/2017)
Atom	Savings tool	Current account and credit cards planned for 2017	SME lending and residential mortgages planned for late 2016	40k registered, 2k accounts opened
Monzo	Pre-paid MasterCard	Current account planned for 2017	Overdrafts ('a small amount')	>80k cards (12/2016)
Starling	Current account and debit card	Various app-based money mgmt. tools (visualizations etc.)	No	Unclear (2)
Loot	Prepaid MasterCard	Money mgmt. tools, sort code and account number, direct debit	No	5,000 (Waiting List of 20,000) as of (11/2016)
LunarWay	Current account and Visa card	Money mgmt. tools, savings tools	No	Unclear (2)
Tide	Current account for small businesses, MasterCard	Accounting, payment services	No, money is held in ring-fenced Barclays account	Unclear (Public Beta version since 12/2016) (2)

(1) Unclear if lending will be part of the business, information taken from press articles, not from the bank itself and/or from interviews
(2) Actual number of customers or estimate thereof couldn't be determined

Banking 101 – Welfare Contribution through Volume and Maturity Transformation

A major part of banks' welfare contribution is rooted in classic financial intermediation: so-called volume and maturity transformations. The way it works is simple and perhaps obvious, at least superficially. Bank customers deposit money in their checkings and savings accounts, and banks use this money to fund loans. In order to make this work, two things must happen. First, a bank bundles deposit money from various deposits together to fund one loan. The reason is that volume-wise, a single deposit wouldn't be sufficient to fund a whole loan as loan volumes are usually larger than deposit volumes. This is called a 'volume' transformation. The second magic trick a bank performs is the aforementioned maturity transformation. This is quite crucial for the point I'm trying to make, so bear with me. For reasons of simplicity, assume customers would only use checkings and savings deposits. Checkings deposits can be accessed by customers on a daily basis. Hypothetically, every customer could withdraw the full checkings account anytime he or she wanted. And although longer-term savings deposits are not always accessible on a daily basis, customers can nevertheless access that money on some notice, or after paying some fees. The point is: deposits usually have a rather short 'maturity', meaning a customer can access that money whenever he or she wants. The customer always has his or her money at full disposal. This makes these deposits very 'liquid' and therefore convenient for a customer. Now think about a loan. Loans usually have a longer 'maturity', meaning that they only have to be repaid after months or, in case of e.g. mortgages, decades. This makes loans very convenient for the borrower, too. Getting a loan means you have that money for a while, so the borrower is also very 'liquid'.

Imagine the following scenario: a bank has 12 separate customers, 10 have deposits and 2 want loans. Each deposit client holds a minimum balance of $1,000 in her deposit. So, the minimum available amount of deposited money a bank has at

its disposal is (10 x $1,000 =) $10,000. The bank could now use this money to fund loans. Assume the bank decided to lend $8,000 to its two loan clients, granting $4,000 each. Further assume that the loans are lent out over a five year period (assuming full repayment at the end of the loan contract maturity). This means that the bank 'created' $8,000 in extra money for the economy. The depositors still 'have' their money, so do the borrowers. And because the borrowers have the money available for a full five years, and the deposits have it available on a daily basis, the money's maturity has been extended. The $2,000 in difference between the deposits and loans is kept by the bank as a safety cushion in case any of the deposits would withdraw more than their minimum balance. So, for five years, the bank creates $$$ for the economy. The borrowers would spend the money, invest it, perhaps turn it into more money, and then repay it. Now, assume the bank would keep the deposited money in cash in a vault. That means, the money wouldn't be spent. It would be kept from the economy, it e.g. couldn't be invested in jobs, or spent on goods. So, by transforming both volume and maturity of 'cash' when turning deposits into loans, banks perform a vital function for the economy. And the actual amounts of liquidity that are created are not non-trivial: throughout the 2000s, banks in the US created an annual average volume of about $5 trillion in liquidity for the economy (numbers taken from Allen Berger of Univ. of South Carolina and Christa Bouwman of Texas A&M, the leading researchers in this field).

What sounds like a magic trick is nothing but a profitable business model built on the law of large numbers. Not everybody withdraws their deposits at the same time, allowing banks to lend this money out over longer periods of time. Mind you, the banks are no altruists in this. The topic of this article is not macroeconomics so I'll spare you the details. But: interest rates for monetary transactions with longer maturities/durations are usually higher than those with shorter maturities/durations (the technical term is a 'positive yield curve spread'). A simple way to think about this is risk: if somebody lends somebody else money over, say, a five year period, the risk of not getting it back is higher than if the money was lent over a 5 day period to the same person. Opportunity costs are higher also. Hence the higher interest rates for longer-term durations. This means: banks make more money off of originating a loan than they have to pay in deposit interest rates. But, more on monetization another time.

The Link to 'Challengers'

For those of you that are still with me after all this financial weirdness – here's my main point which you are probably well aware of by now: transforming maturities hugely benefits the economy a bank operates in. People have cash readily available in their deposits, and borrowers obtain long-term loans. Financial institutions that just accept deposits but don't originate loans suck that money out of the economic system. This is detrimental to economic welfare. Yet, challenger banks pursue this business model. They accept deposits and 'invest' the money only in overdrafts (a rough 20% for those that do), in government bonds or hold it in cash (see the Tide quote). Now, is this really a problem in terms of economic welfare or is the magnitude negligible? Let's run some numbers. For example, N26 has somewhere north of 200k customers.

Assuming every customer has a steady balance of, say £2,000 in their account, and 80% thereof would be invested in government bonds, then £320mn. are taken away from the economic cash flow. The effect will be even stronger for challenger banks servicing corporate clients, as Tide. They are just getting started and it is unclear how many users they will acquire/onboard in the first year. However, corporate accounts hold more cash, and a large fraction of liquidity in regular banks is created through corporate deposits turned into loans.

But it is not just liquidity creation which is affected by challenger banks' decision not to lend out deposit money. They also miss out on return possibilities created by maturity transformation – see the 'yield curve' effect I mentioned earlier. Instead, they monetize through fees for certain services and minor overdraft penalty rates. (My hunch is that the mentioned fees are only a fraction of what could be made through yield curve exploitation. Again, this will be a topic for another day).

So why do Challengers avoid the lending business? It is easy to see the appeal, both from an operating and risk perspective: setting up lending operations is costly, faces a high regulatory burden (especially capital which, for a startup, is not what you want to use your funding for) and exposes deposit money to loan default risk. So, in order to build a bank quickly and aggressively, it is easier to avoid the lending business altogether. Also, there might perhaps be another reason why the account business has higher appeal than the lending business: loan applications might have to be denied, delinquent interest payments enforced or collateral seized. In other words: the lending business is more unpleasant than the account/deposit business. However, the long-term benefits will surely outweigh the short-term challenges at some point, especially from a return/profit perspective. I therefore guess that the strategy Monzo & Co pursue is to acquire as many customers as possible by using a product with high appeal, quick onboarding and low costs. Once the customers are used to it, the challengers will slowly expand their range of products to increase the share of wallet of the customers and set up lending operations eventually. The sustainable and profitable banking business will then be built around a 'classic' banking model – making these banks perhaps not too 'challenging' after all. At least that's what I hope for in the light of the importance of liquidity creation for economic welfare!

About the Author

Dr. Christian Rauch is a seasoned academic professional, having obtained his undergrad and grad degrees from New York University and European Business School, and his PhD in Finance from Goethe University Frankfurt, focusing on risk management in financial institutions. Prior to co-founding Grove House, he was researcher, lecturer and Barclays Fellow in Entrepreneurial Finance at Saïd Business School of the University of Oxford. Next to researching and lecturing in Venture Capital, Private Equity and Banking, he mentors Start-Ups and founders as part of his work at university incubators and corporate accelerator programs. His research papers have been presented at various conferences around the world, including the *American Finance Association (AFA)* Annual Meeting, and published in leading academic journals, such as the *Journal of Money, Credit and Banking, Financial Management* or *Journal of Banking & Finance*. His policy research, written with, among others, the SAFE Center in Frankfurt/Germany or Brookings Institution in Washington, D.C., focuses on regulatory topics in finance.

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