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Why Be a Bank?

There are two types of digital banks: bottom-up and top-down.

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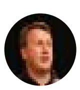
Before I dive into today's post, here is a nugget. Stripe made two big launches this week:

- Stripe Capital for platforms
- Stripe Treasury for platforms

Now Shopify's merchant like Lindt Chocolate can take a loan from Shopify facilitated by Stripe. With Stripe Treasury, Shopify can open a FDIC protected bank account for their new merchants via Stripe.

A few weeks ago I wrote that Stripe should be a bank. Instead, they now provide banking as a service to the customers of their customers. Stripe has just expanded the market again. Their ambitions are boundless.



Paul Graham
@paulg

The only limits on Stripe's potential are the energy of the Collisons and the size of their market. Which one runs out first?

June 21st 2020

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This week I am looking at neo-banks. With the fundraise by Current, and rumours of Starling's acquisition, I've been thinking a lot about different paths neo-banks take. In this post:

- *Neo-banks and regulation*
- *Two types of neo-banks*
- *Why lending is difficult?*
- *Can retail banking scale?*
- *Alternative paths*

PayPal was probably the first fintech company, before fintech even had a name. Since then and for the last 20 years we saw different trends from online payments and peer-to-peer lending platforms, to most recently infrastructure and connectivity products. Fintech was first unbundling banking, chipping away at it with better, faster and more efficient solutions. Now it is bundling again with acquisitions and building of embedded vertical products.

But to me, building digital challenger bank is the most complex endeavour in fintech. Because banking is both overstated and understated simultaneously: everyone has a notion of what banks do, and at the same time it is very hard to make them work right.

The dichotomy is in marrying up technology that defines growth and scale with regulation that is about prudence and risk management.

Neo-banks and regulation

There are 100+ fintech companies that provide banking services, including digital wallets, consumer credit, savings and investments. But not all of them are actually regulated banks.

Only 3 out of the top 10 challenger banks are real banks

CFTE Centre for Finance, Technology and Entrepreneurship

Bank

Rank	Company	Valuation ($Bn)	Clients (M)	Banking license	Real Bank
1.	nubank	10	22	✓	✗
2.	chime	5.8	8	✗	✗
3.	Revolut	5.5	12.5	✓	✗
4.	SoFi	4.8	1	✗	✗
5.	N26	3.5	5	✓	✓
6.	OakNorth Bank	2.8	0.14	✓	✓
7.	monzo	1.6	4.75	✓	✓
8.	upgrade	1	10	✗	✗
9.	Dave	1	4	✗	✗
10.	ualá	0.99	1.3	✗	✗

At a high level banks can do the following:

- facilitate payments (e.g. money transfers, prepaid cards)
- lend to customers
- take and lend out deposits

Non-banks can undertake payments facilitation and consumer lending. But deposit taking and using them as source of funding is exclusive to regulated banks only. Non-banks like Revolut can still accept deposits, but they have to safeguard them at a regulated bank like Barclays.

When it comes to protecting customers money, regulation is upped significantly. After an extensive process of approving a license, regulators continue to closely monitor risk management, capital adequacy, controls, executive and board performance. That scrutiny continues to grow for startups as for example, the Bank of England says prospective banks must prepare for a "sizeable step-up" in capital requirements as a "clear path to profitability" is "necessary condition for success".

The second order effects of regulation are even more impactful. Executives and board have to spend a non-trivial amount of time with regulators, which limits their bandwidth for strategy, growth and expansion. All major plans and product launches need to be vetted, which slows down the speed of shipment. People costs to beef up internal compliance and risk management functions will grow. All these changes often come at odds with the tech's culture of "move fast and break things".

Nevertheless there is a massive upside to having a banking license, which includes customer trust in protected banks, cheap funding for loans, not needing to share revenue with partner banks, freedom in strategic and product choices.

That's why the appetite for being a regulated bank is not wavering. In the US, Varo Bank became the first neo-bank to receive a national charter. SoFi, a consumer lender, received a conditional charter in October. Square, a payments company behind consumer app Cash App has a limited charter. In the UK, since the setup of New Bank Startup Unit up to 20 banking licenses have been issued including to Monzo, Starling, Zopa. Revolut is firmly on the path to get one soon.

But different types of neo-banks chose to be a real bank for different reasons.

Two types of neo-banks

To my mind there have been two main paths to becoming new banks:

- **Bottom-up:** Consumer lending companies like SoFi in the US and Zopa in the UK apply to become banks to solve their funding needs. These companies already have long and established lending businesses and becoming a bank for them is about closing the funding supply chain loop. Growing lending is their key driver.
- **Top-down:** Personal finance and digital bank apps like Revolut, Starling and Square's Cash App want to disrupt a traditional way of banking. They view lending as just an extension of the overall package which is primarily about customer experience.

Bottom-up banks have a customer base with high retention, and as such are already monetising them better. Becoming a bank for them is primarily about revenue optimisation by cutting the fees they have to share with providers of liquidity. These banks will remain niche with customers drawn to them primarily for credit.

Top-down banks, on the other hand, have "grander" missions from the outset. They actually want to disrupt incumbents:

> *Starling: "Changing banking for good"*

> *Monzo: "Banking made easy"*

> *Chime: "Banking that has your back"*

> *Cash App: "Send, spend, save, and invest. No bank necessary."*

They are focused on a wholesome customer experience, scale and broad based customer acquisition. As a result, there is more venture appetite for these banks, and they command higher valuations, despite lower revenues per customer. Investors believe that monetisation will eventually come at some point, and it's better to have a scale set up for that. That notion is re-adjusting post WeWork, but number of loss making but successful IPOs is a proof that investors prefer scale rather than deep wallets.

	chime	$	Revolut	STARLING BANK	ZOPA	SoFi
Country	**US**	**US**	**UK**	**UK**	**UK**	**US**
Number of customers	8 million	30 million	12.5 million	1.8 million	0.5 million	1 million
Revenue	$200 million	$2.4 billion	$215 million	$145 million	$65 million	$547 million
ARPU	**$25**	**$80**	**$17**	**$81**	**$130**	**$547**
Type	Top-down	Top-down	Top-down	Top-down	Bottom-up	Bottom-up

Bottom-up banks have lower revenue per users, but more customers vs top-down banks (Starling) and top-down challengers. *Data from open sources, dates might not be comparable

Different skillset positions bottom-up banks to reach profitability much sooner.

There has been only one path to profitability for neo-banks so far - lending, and bottom-up banks are ahead at it (as are few other fintechs who do lending, e.g. ClearScore and Iwoca in the UK). Zopa was profitable even before it became a bank. OakNorth, a new UK bank focused on SME lending consistently makes 30%+ on net profit margins. Starling, the first top-down neo-bank to break even last month did so on the back of lending out covid relief loans.

So why is lending a profit driver? Here is a simple math: a loan of $5k at 10% would mean that the first year revenue from one loan to a customer would be almost $500. TransferWise that I covered last week which is also one of the few profitable fintechs, made £43 per customer last year. No other service can monetise customers the way profitable lending does.

So it is right to assume that when a top-down challenger bank applies for a banking license, it is on a path to start lending. But lending is a tough business to scale.

Why lending is difficult?

Basic banking business model is to take deposits and lend them at a fee to customers. This sounds simple enough. But in reality, because there are many unknowns including mismatch in maturity between deposits and loans, credit-worthiness of borrowers, unknown future events like global pandemic, banks really are in the business of managing risk. Bottom up banks, having built their lending business prior to becoming a bank, mastered one part of the risk: pricing and credit decisioning. Top-down banks have to learn that from scratch.

Don't say anything, I love this graph

Imposed by financial and regulatory standards, these risks are managed by two concepts: capital requirement and provisions. Folks outside of financial services find it hard to conceptualise these concepts because none of them are typical cash costs of running a business.

Capital requirement

As banks start lending, they need to hold a proportion of their lending business in capital reserves to protect some of the equity in the event of collapse. At the start this is often a very meaningful share of total equity, for example, last year Starling's share of minimum capital requirement over total equity was 35%. Put it another way, if Starling raises £200 million as they plan, they will need to reserve a third of that and make the remaining 2/3 work extra hard (assuming they continue lending). This is also often portrayed as a charge - e.g. £1 loan issued would need 6p in capital support.

By extension, the more the lending business scales, the higher is the capital requirement. This often means that banks need large outside investments to prop up their equity. Interest revenue from growing and maturing book would eventually offset that impact, but it will take months, or even years before lending becomes self-sustained.

Unlike other startups that can use all of venture capital to burn through on costs until profitability, startup banks have to allocate a significant part of fundraising to grow the lending book.

Provisions

The second concept is provisions. Before giving out a loan, the bank needs to estimate the likelihood of that loan going bad. The higher is the probability, the more of the provision charge is deducted from the revenues (and more capital requirement will be needed). These probabilities are fully priced into the interest rate, so that the net revenue is always attractive. However, as there is a lag between origination and when the loan is due, these defaults can blow up. Unforeseen circumstances like global pandemic can make even stalwart banks lose billions in the scope of one quarter.

So capital requirements together with provisions make building the loan book from scratch a capital intensive business. However, once provision and capital requirement are offset by accreting revenue, the remaining lifetime of the loan is a pure profit accumulation. Money is earned 24/7 without the bank needing to do anything.

Lending is so profitable because it is a loop: mature loans fund new business. Capital requirements from new business will be covered by interest streams from mature book. Once the flywheel is started, it's hard to stop.

Can retail banking scale?

Bottom-up banks are focused on monetising and managing their existing customers and are rarely prioritising scaled expansion.

Top-down banks, on the other hand, consider scaling as part of their business model where they can leverage technology and user experience to acquire customers as fast as possible. But the cost of risk management is a severe challenge for the fast and sustained growth.

Cost of risk management means that banks have to setup large teams and build experience of credit decisions, maturity management, controls, etc. This function is hard to scale into the new markets so it has to be built ground up factoring in credit healthiness, competition, cost of acquisition, etc. Not to mention that consumer lending is one of the most saturated industries, where challenger banks have to compromise on price or accept higher risk (which means higher capital).

Scaling and expansion for any company is a tough challenge, especially when this expansion is to new markets, requiring product customisation. Case in point: Revolut which has expanded to almost 40 countries last year made 99.8% of its revenue in the UK. Added to that regulatory pressure and capital requirements of a regulated bank - expansion becomes a gargantuan challenge. There is a reason why despite globalisation in financial services, retail banks are all mostly local - e.g. Lloyds in the UK, Chase in the US.

Also the reason Revolut wants a banking license in the UK is precisely because it is seeing monetisation patterns in the UK - the last and by far the biggest push to profits will come from lending.

Starling bank is one of the top-down banks which is pursuing a narrower growth strategy, perhaps realising the challenges of profitable scale. It has just 1.8 million customers, but has the levels of engagement comparable to incumbent banks and is already profitable.

What are the alternatives?

Alternative paths

Becoming a bank is like growing another limb. Fintechs should only do that if it is really adjacent to the strategy of being a bank. The future strategy is path dependent. The skillset and culture built around compliance, risk management, regulation, even the construction of the board will mean that there will be certain frameworks of how the company thinks about expansion and product strategy. After becoming a bank a lot of efforts goes into being one.

So if digital banking app doesn't want to be a bank, consistent and profitable lending is out of the question. There are two other ways:

- Fees on transactions and extra services
- Subscriptions

Fees business can be profitable as proven by TransferWise which is the only profitable fintech not engaged in lending. Square's Cash App is also operationally profitable from just fees. Crypto, trading, FX, interchange, travel - all a scale business, so the more customers the better which is suited to neo-banks tuned to expansion. Of course the size of the US market dwarfs almost any other market bar China, so the companies in the US have an upper hand - Cash App has 30 million monthly active users.

Subscriptions is a relatively new model in banking adopted by N26, Revolut and Monzo. There is almost unlimited menu of what could go into subscriptions. Importantly, this revenue is stable, predictable and if done well, recurring. There are novel ways of financing subscriptions too.

Both of these revenue sources allow companies to start earning from Day 1. They won't earn a $500 ARPU per customer but will scale faster. Neo-banks have technology that is natural for scale, but risk management hasn't been solved the same way yet.

Starling, a first profit making neo-bank, could be acquired by JP Morgan or Lloyds. Good exit for founders, but feels short of the original fintech promise of new horizons. Perhaps retail banking is yet to be disrupted.