



BANK OF ENGLAND

Speech

Challenges in Note Circulation – Availability and Quality of Low Denomination Notes

Speech given by

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Introduction

The Bank of England has been issuing banknotes for over 300 years. The designs have changed a great deal during that time, as has the role of notes in the economy. But the guiding objective of note issue remains the same: confidence in the currency. At the heart of this is protecting the integrity of the notes, both in terms of their security features and in maintaining quality. And notes must be available in sufficient quantities to meet the public's demand.

The current level of demand for Bank of England notes gives little credence to speculation about the 'death of cash'. In the UK, consumers make around 20 billion cash payments per year, totalling £267 billion. These payments tend to be for small value purchases: 4 in every 5 of them are for less than £10 (Chart 1).

For cash to be convenient, and to function as an efficient means of exchange, a suitable denominational mix should be available to the public. And this is the challenge in note circulation that I would like to discuss today: although the title of this presentation did provide an opportunity to discuss a myriad of other challenges that the cash industry faces!

In the UK, ATMs are more popular than ever before, but the vast majority only dispense £10s and £20s. As a result it is more difficult for ample good quality £5s to enter circulation. Evidence shows that the public want to acquire more £5s to make payments, and to receive better quality £5s in change. So I am pleased to say that the fortunes of the fiver are being transformed. **£5 dispense is being introduced at thousands of ATMs up and down the country, and in 2012 we expect that £4 billion good-quality £5s will enter circulation - nearly twice as many as last year.**

I want to outline this morning how the Bank is working with the UK cash industry to improve the availability and quality of the £5, and the lessons that can be learned by others for addressing the challenge of low denomination notes.

An overview of the note cycle

But first, let me set the context by giving you a brief introduction to the Bank's role in the note cycle. The Bank is the sole issuer of notes in England and Wales. Our role has evolved significantly over the past few decades and our physical involvement in the note cycle is now limited to the issue of new, and the destruction of unfit, notes. We do, of course, have an instrumental role in overseeing the intervening functions, which are performed by the commercial sector.

In 2003, the Bank outsourced the physical printing of new notes to the commercial sector. The contract is currently held by De La Rue, and work on the retender process is about to commence in time for the contract

expiry in 2015. The Bank still has a crucial role in the design of the notes and implements a rigorous quality control process.

We have also moved to a more commercially-based model for wholesale note distribution. Since 1982, the Bank has enabled the wholesale cash industry to store surplus notes in their secure cash centres, rather than frequently returning them mid-cycle to the Bank. And since the late 1990s, note authentication and fitness-sorting has taken place wholly within the commercial sector. There are five members of the Note Circulation Scheme (NCS) ¹ - including commercial banks, specialised wholesale cash processors and the Post Office - and they use high-speed note sorters, manufactured by some of you here today to identify notes that are suitable for recirculation.

The challenge of low denomination notes

Each denomination has a different role in the cash cycle. The £50 is predominantly a store of value: it is typically retained, or 'hoarded', for long periods. We observed a sharp increase in the acquisition of £50s during the financial crisis - increasing by nearly one-third in the last quarter of 2008 alone - as some people withdrew money from bank accounts to physically hold as cash. The £20 and £10 are the main transactional notes in the UK, accounting for - respectively - around 65% and 31% of the value of notes acquired by the public. They are used almost entirely for consumer payments: they are typically withdrawn from ATMs, spent in a retail transaction, and then banked - so that the value can be converted into an interest bearing asset.

The £5 is typically used as a transactional note that frequently changes hands between consumers and retailers, but it is less frequently banked. A note used by one consumer as *payment* is often received by the next as *change*. Retailers, wary of running out, sometimes retain all the £5s they receive as 'float'. Or they may only bank the scruffiest £5s, which are then returned to the NCS for fitness-sorting. A typical £5 is now sorted less than twice a year (Chart 2): in contrast a typical £10 note is fitness-sorted by the NCS around nine times a year, and a typical £20 around four times a year. They are the notes that are most commonly acquired by consumers from ATMs and therefore are tendered more in transactions. Retailers frequently accumulate surpluses of these denominations and so are more confident about banking them.

Identifying the £5 problem

A clear message comes from the letters sent to us by members of the public and in surveys: good-quality £5s are too hard to come by, and cash transactions are therefore less efficient.

But we have hundreds of millions of crisp, newly printed £5s ready to circulate. To understand why they are not getting into the hands of the public we measure a range of data. We calculate the frequency with which

¹ The NCS members are: Bank of Scotland plc, G4S Cash Centres (UK) Ltd, Post Office Ltd, Royal Bank of Scotland plc and Vaultex UK Ltd (a joint venture between Barclays Bank and HSBC Bank).

notes pass through the NCS; we conduct an annual survey of the public's perception of note availability and quality; and we measure the fitness of a sizable sample of notes in circulation each year.

Over 85% of people say that the £5s they receive are usually from retailers, as change or cash-back. But their quality is not comparable to the other denominations. In 2004, 63% of people thought that £5s were of similar (or better) quality than £10s. In 2010, this had decreased to 38%. Our quality sampling also suggests that the average quality of £5s in circulation is lower than the other denominations.

The changing dynamics of cash acquisition

We have concluded that £5s are not fitness-sorted by the NCS frequently enough to maintain the quality of notes in circulation. This is largely because not enough £5s are acquired by consumers in the first place, and they are reluctant to part with those they receive. At the heart of the quality problem is an availability problem.

In the UK, ATMs have had a major impact on the denominational mix of notes available to the public. Over the last decade, ATMs - which typically only dispense £10s and £20s - have become the dominant means of acquiring cash. The value they dispensed increased from £114 billion in 2000, to nearly £200 billion last year. Around 85% of the cash acquired from bank accounts is from ATMs (Chart 3). The number of ATMs in the UK has increased greatly, to more than 60,000 today. British adults make withdrawals from ATMs, on average, nearly 60 times a year – which is one of the highest rates in Europe.

Improving the availability and quality of £5 notes

The availability of the £5 has therefore been squeezed. The public acquire around 40% fewer £5s than they did a decade ago (Chart 4). Why does this matter to the Bank?

We want the public to be confident in their ability to transact in cash efficiently. A suitable denominational mix needs to be available to the public. We are therefore working closely with NCS Members, financial institutions and retailers to increase the availability of £5s.

In 2009, we worked with HSBC to pilot £5 dispense in 100 ATMs. The pilot sought to understand the typical concerns of ATM operators about £5s. These included capital expenditure, additional refill costs, ATM performance and customer satisfaction.

Encouragingly, the results indicated that the cost implications of ATM dispense are manageable. Existing £10 or £20 ATM cassettes can be re-configured, rather than purchased as new. Some ATMs are typically replenished long before they run out of notes - i.e. they carry significant 'contingency margins'. Replacing a £10 or £20 cassette with one carrying £5s should not require such an ATM to be replenished more

frequently. £5 notes do not 'jam' the machinery more than the other denominations if they are fitness-sorted to an appropriate quality. And our surveys suggest that many people would prefer £5 notes in their ATM withdrawals.

We are grateful to HSBC for participating in the pilot. In the last year we have set about implementing its findings. This has involved considerable work across different elements of the cash industry - it is not a matter that can be addressed single-handedly by any one organisation.

First, used £5s are now only re-circulated by the NCS if they meet a new standard: 'Super ATM-fit'. That means that the high-speed sorting machines apply a lower tolerance for soiling, tears and tape. Used notes that do not meet this standard are destroyed and replaced with new notes, which promotes the average quality of £5s in circulation. ATM operators can therefore be confident that £5 dispense will not cause increased note-jams. And once they are dispensed, they will be better able to withstand the wear and tear that results from exchanging hands between consumers and retailers.

Second, we are refining the NCS to ensure that the incentives for note distribution are properly aligned across the denominations. This should help to reduce the costs of distributing £5s.

Third, Andrew Bailey - the Bank's Chief Cashier who will be moving on in April this year after seven influential years in role² - asked ATM operators to ensure that at least 1.2% of their dispense is in £5s. We are delighted that the ten largest ATM operators have committed to increasing the dispense of £5 notes.

Introducing £5 dispense is a significant undertaking for the ATM operators. Typically, around 10-15% of such operators' ATMs will be re-configured to dispense £5s. They have each supplied us with a project plan, which we monitor. Let me run through some of the most important steps.

- Key to success is ensuring that ATMs do not run out of notes. ATM operators are **carefully selecting those machines** which, due to their pattern of usage, can be stocked with £5s without needing to be refilled any more frequently.
- Most ATM operators have developed **new dispense algorithms** – to calculate the number of £5s to dispense. Some have needed to modify their operating software significantly, and to update their forecasting systems.
- There are physical changes required to fit £5 ATM cassettes.
- Survey evidence suggests that customers like to receive some £5s in their withdrawals, and may travel a little further to do so. ATM operators are therefore considering how best to **identify £5-dispensing ATMs**. For example, some have redesigned the ATM screen.

² Andrew Bailey will become Deputy Head of the Prudential Business Unit of the FSA. The move is in anticipation of the formation of the Prudential Regulation Authority in early 2013, of which Andrew will become Deputy Chief Executive. He will be replaced as Chief Cashier by Chris Salmon.

Progress so far

£5 ATM roll-outs began in September 2010. £5 ATM dispense is on track to have increased five-fold by Easter. Nearly a third of the planned ATM re-configurations have already taken place, with a further third on schedule for completion by the middle of 2011.

HSBC and Barclays have completed the vast bulk of their roll-outs. RBS, Nationwide and the Post Office are also well on the way, with a number of other major ATM operators due to begin roll-outs in the coming weeks. We have also encouraged the largest independent ATM operators to introduce £5 dispense - a number have this in hand already. These include Bank Machine, which has over 200 £5-only ATMs, and Cashzone, which has just begun a pilot for £5 ATM dispense.

In 2010, just over £2 billion of £5s were acquired by the public - mostly over bank, building society or Post Office counters. In 2012, we expect the total annual acquisition of £5s to increase to £4 billion (Chart 5).

These numbers are very encouraging. ATM operators are not just responding to the Bank's target (that 1.2% of their total dispense is in £5s), they are responding to popular demand. They tell us that their customers are pleased to receive some £5s in their withdrawals.

Retailers have a critical role too. Given the ATM changes, they should expect to receive more £5s as payment. They can supplement these by directly increasing their ordering of £5s for their tills. Since they piloted increased £5 ordering in 2009, Sainsbury's £5 order has increased significantly. We are encouraging the other large retailers to follow suit.

Concluding remarks

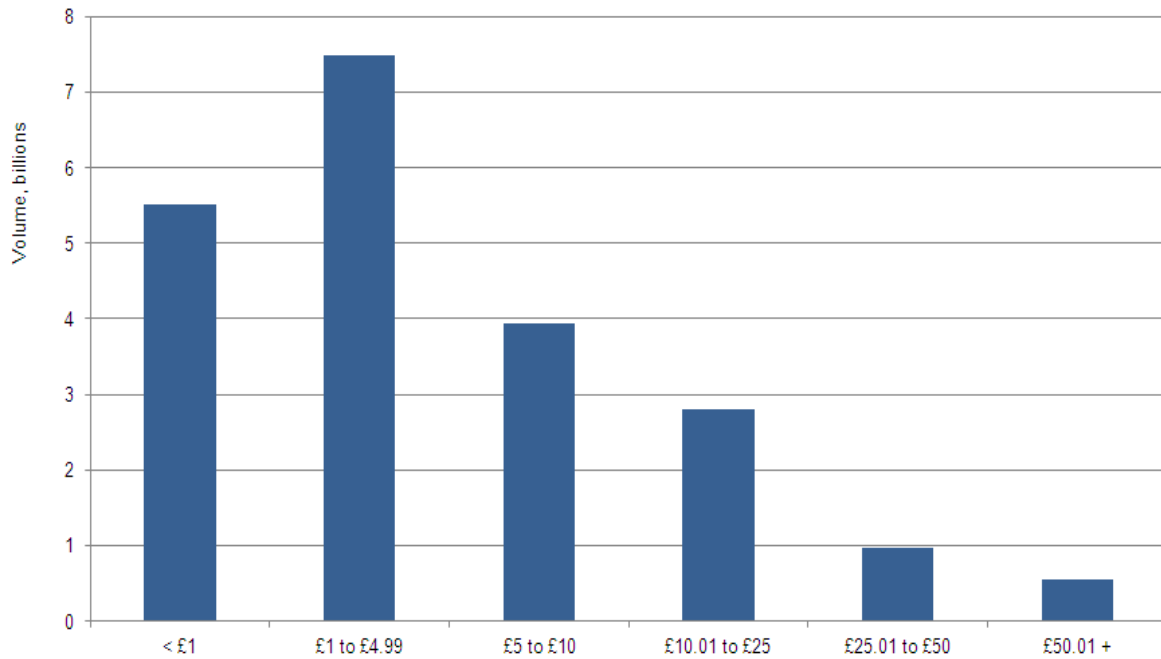
In summary, low denomination notes are high on our list of priorities. All players in the cash cycle share a responsibility for ensuring that notes function as an efficient means of payment. Achieving an appropriate denominational mix of cash acquisition by the public is an essential part of this.

Increasing the acquisition of £5s from around £2 billion to £4 billion per year will reverse the trend we have seen in recent years. It is our best estimate of the annual acquisition of £5s required to resolve the problem - but it may need to be higher. We will of course keep its impact under close review.

But in time, we hope a 'virtuous circle' will develop. As more £5s are acquired by the public, those in circulation should be fitness-sorted more frequently. As the poor-quality £5s are removed, the average quality of the £5s in people's wallet or purse should improve. This change cannot happen overnight - there is still work to be done to complete the ATM roll outs, and then people will need to have the confidence to part with £5s knowing that more are very close to hand.

I am most grateful for the co-operation of NCS Members, financial institutions and retailers in addressing the inextricably linked challenges of £5 availability and quality. There is no doubt that the public welcome the changes that have taken place so far and over the coming months, the fiver should start to look as familiar - and as smart - as our other denominations.

Chart 1: Consumer cash payments by value band, 2009³



³ Source: UK Payments

Chart 2: Frequency with which notes pass through an NCS cash centre⁴

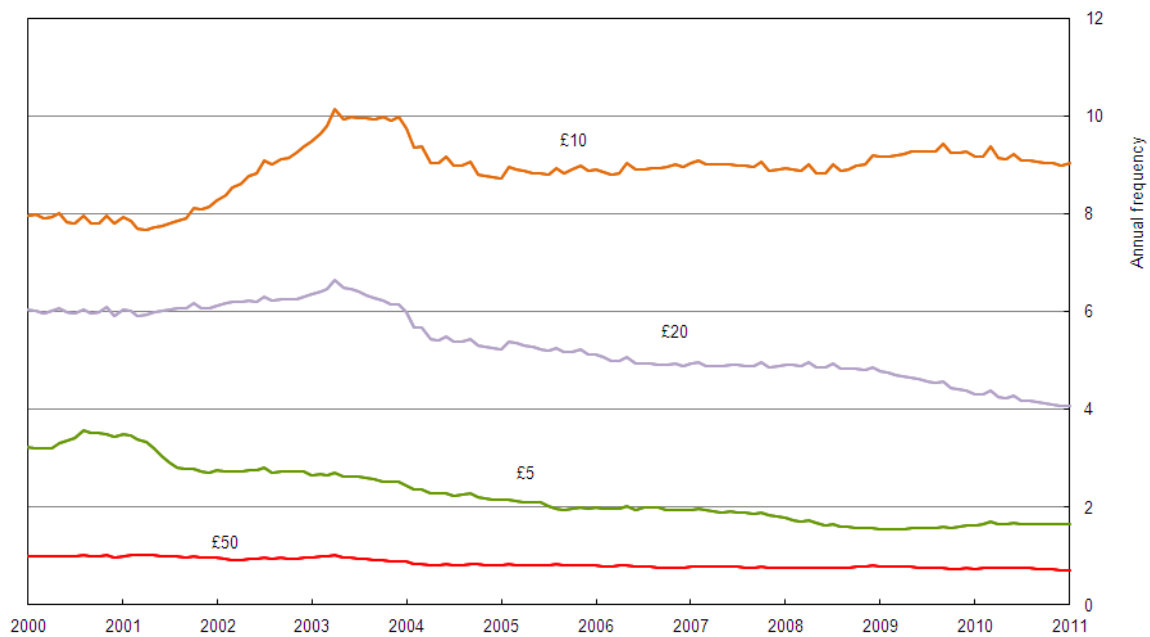
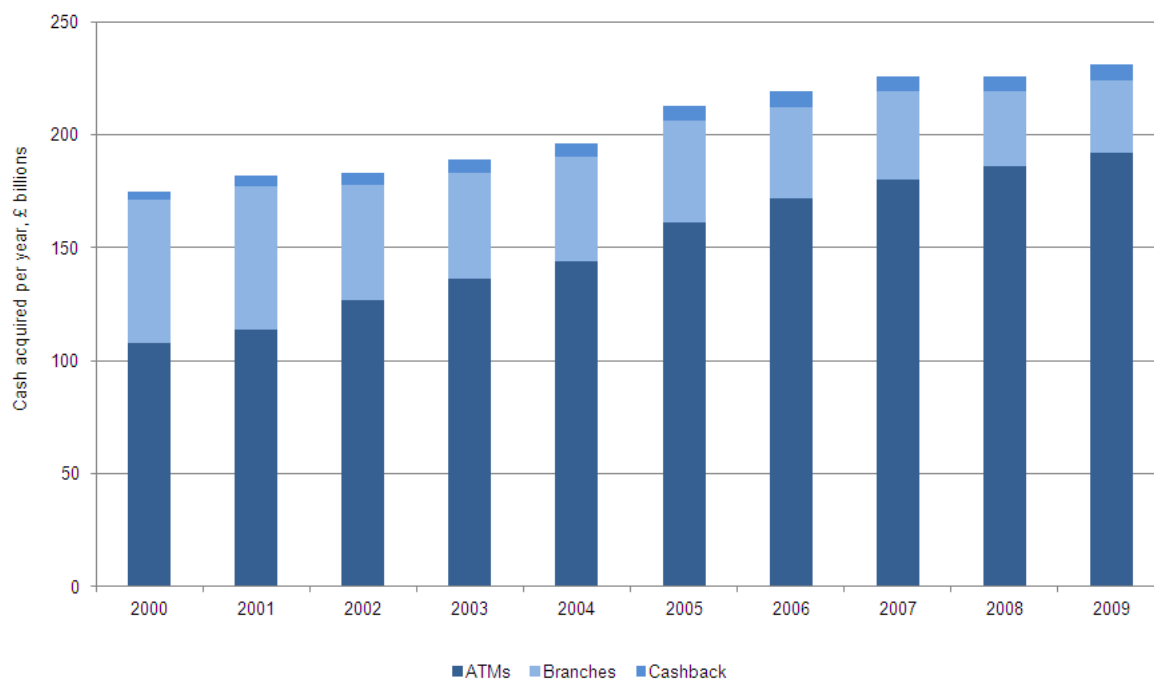


Chart 3: Acquisition of cash from accounts⁵



⁴ The average number of times a note passes through an NCS cash centre each year. Calculated as a twelve-month moving average of annualised monthly outflows from NCS cash centres divided by notes in circulation of that denomination. Latest data provided for 2011 at end-January.

⁵ Source: UK Payments

Chart 4: Index of £5, £10 and £20 annual acquisition from the NCS⁶

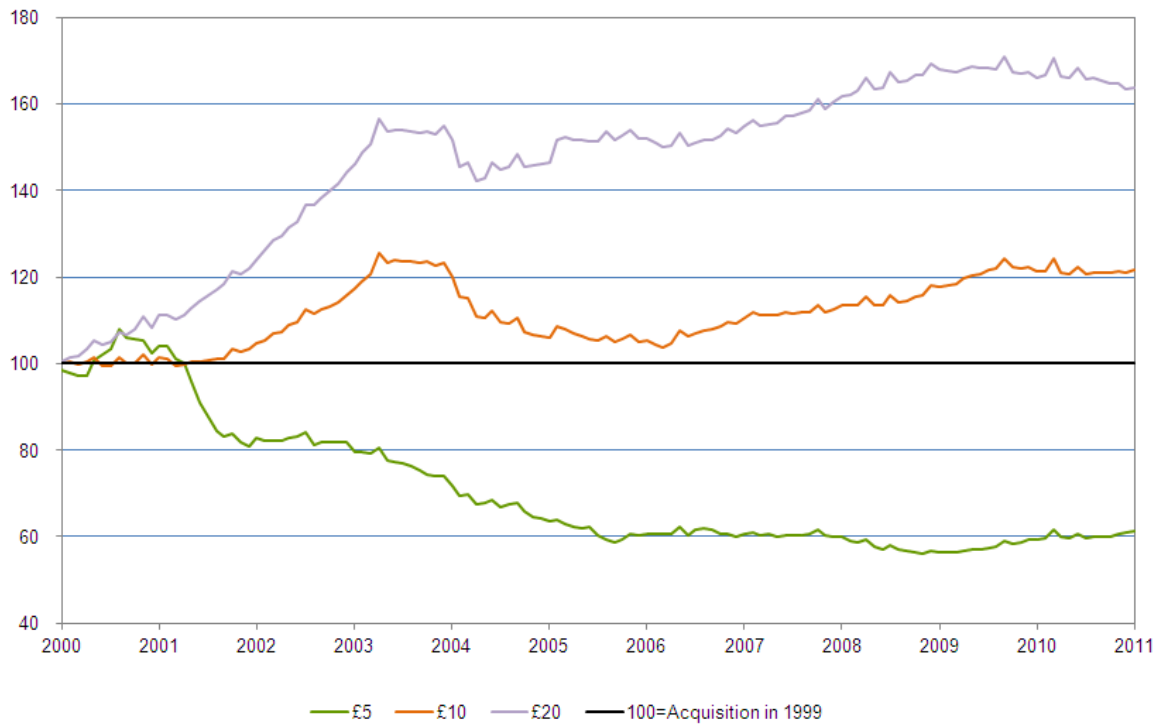
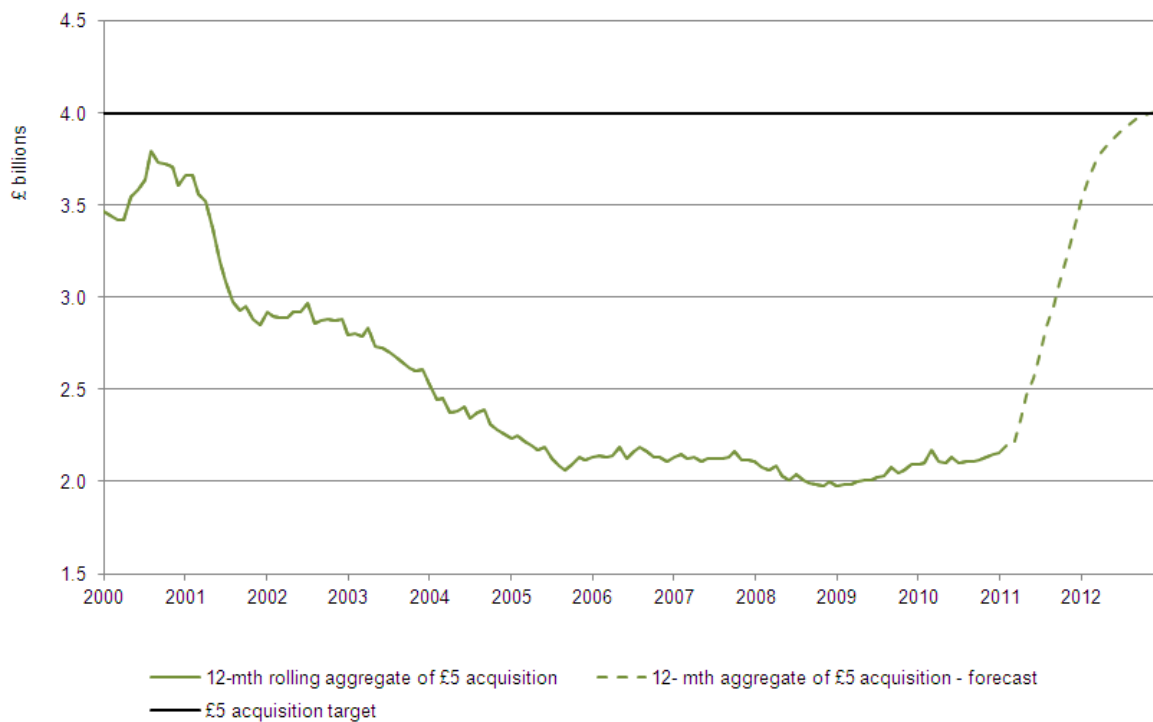


Chart 5: Annual acquisition of £5s from the NCS – actual data and forecast⁷



⁶ Latest data provided for 2011 at end-January.

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