Banking on Gambling: Banks and Lottery-Linked Deposit Accounts

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Abstract

Deposit accounts that provide an interest return determined by a lottery have proved to be popular around the world. From the point of view of a bank, these products are especially successful among relatively low-income customers, or in markets in which many people are outside the banking system. Below, we describe numerous examples of such accounts, and analyze their economics.

Key words: Randomized return, lottery, behavioral finance.

1. Introduction

Banks continually search for new products to offer depositors. One product available in many countries around the world is the lottery-linked deposit account (LLDA). Their ubiquity is a testament to a popularity that transcends particular cultures and societies. The development of the Internet, and especially the development of Internet gambling, suggests that one can expect these accounts soon to be available in markets where they are not currently offered. This alone makes the LLDA worth further examination.

Governments and banks around the world have introduced savings instruments that combine savings with a lottery. The basic structure of an LLDA is simple. Typically, the bank automatically enrolls in a lottery those depositors who maintain a deposit of some specified size for some specified period in the designated accounts. Commonly, the depositor receives one “lottery ticket” or chance, each month for every X dollars he has on deposit for that month. The buyer pays for her lottery tickets by foregoing interest relative to an account that does not have the lottery feature. The lottery does not affect the principal of the deposit, but the interest rate that the holder receives each period is a random variable. The interest rate the holder actually receives could be very low—perhaps zero or only nominal, depending on the scheme’s structure—or it could be very high if the owner is lucky enough to win the grand prize.

Section 2 describes the functioning of the accounts. We first discuss the accounts from the supply side, that is, from the banks’ point of view. Then in section 3 we turn to the demand side, that is, to the depositors’ point of view. Here we relate the accounts to the
Table 1. Lottery-linked deposit accounts (LLDAs) at Banco Bilbao Vizcaya’s (BBV) subsidiaries in Latin America

This table shows the launch date of BBV’s LLDAs in several countries where the bank has introduced them, together with the total number of accounts, the total amount of deposits that the accounts have garnered, and the average value per account. Source: BBV internal document dated February 1998.

<table>
<thead>
<tr>
<th>Country</th>
<th>Launch Date</th>
<th>No. of Accounts (Thousands)</th>
<th>Total Volume (US$ Millions)</th>
<th>Vol./Acct. (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico</td>
<td>Aug. 96</td>
<td>485</td>
<td>178</td>
<td>367</td>
</tr>
<tr>
<td>Colombia</td>
<td>Jul. 97</td>
<td>462</td>
<td>205</td>
<td>443</td>
</tr>
<tr>
<td>Venezuela</td>
<td>May. 97</td>
<td>697</td>
<td>642</td>
<td>921</td>
</tr>
<tr>
<td>Argentina</td>
<td>Dec. 97</td>
<td>78</td>
<td>232</td>
<td>2949</td>
</tr>
</tbody>
</table>

literature on risk taking and gambling. Lastly, section 4 is the conclusion and a call for further research. An Appendix provides a number of examples of LLDAs and other lottery-linked securities from both the published literature and from the authors’ own (unsystematic) inquiries.

2. The banks’ point of view

The issuers’ incentive to offer the accounts or bonds is that savers like the lottery feature and reward the issuers by accepting a nominal lower return on the accounts than they would receive on an account that provided a certain return. The account holders may be accepting a bet that is unfair to them, or not. Table 1 gives some data from then Banco Bilbao Vizcaya (BBV) on the number and value of such accounts in its Latin American subsidiaries. BBV, one of the world’s largest retail banks, has been successful with these accounts in several countries.

The lottery feature may simply be a marketing device that differentiates the account from other types of savings instruments. Equally, the accounts may lower the offering bank’s cost of funds. When the lottery is not a “fair game” that is, when the expected value of a ticket is less than the foregone interest, the bank gains. Discussions with executives at Banco Santander and BBV confirm that the LLDAs are a cheaper source of funds than regular savings accounts, even after one takes into account administrative costs and prizes. One respondent estimated that the bank’s cost of funds was from a quarter to a sixth of that compared with a regular time deposit account. This appears high given our calculations below.

In table 2 we present some details for the accounts offered by Banco Río de La Plata, Banco Santander Central Hispano’s subsidiary in Argentina, and by Banco Francés del Río de La Plata, Banco Bilbao Vizcaya Argentaria’s subsidiary, also in Argentina. We have more information for Bank Río than we do for Banco Francés.

Banco Río’s lottery-linked accounts participate in a daily lottery for $20,000 and a monthly lottery for $222,000 (about 20 × average per capita GDP of U.S.$11,000 at PPP in 1998). Each U.S.$200 on deposit gives the depositor one chance or “ticket” in the