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Innovation in Financial Services

CASE STUDY 8: SHARED APPRECIATION MORTGAGE – BANK OF SCOTLAND

The UK housing market is thought to have an aggregate value of about £1200 bn, greater than the combined value of the UK's stock and bond market.

Financial Times 14th November 1996

THE IDEA – RATIONALE AND GETTING BUY-IN

'There must be a way of giving investors access to one of the largest asset pools there is, the housing market,' thought Craig Corn, working at Merrill Lynch at the time as a Director in structured finance. The UK housing market was dominated by owner occupation, with private rental playing only a small role. This meant that for many households a large proportion – in some cases well over 100% – of their net wealth was tied up in a single illiquid asset. The housing mortgage, which plays an essential role in financing housing purchase, does nothing to help householders reduce or diversify their risks. At the same time, commercial investment in residential property was very limited, discouraged by the cost of managing rented property and the difficulties of getting repossession of the asset. Pulling these thoughts together, Craig was convinced there should be some value in designing a financial device that would somehow open up the enormous asset pool and give homeowners an opportunity to leverage their asset. What if one could find a way of linking an investment to a real mortgage? An alternative option would have been to have call options – but he felt that they would be more difficult to understand – and the mortgage market was not so tightly regulated. The seed for what was to become the Shared Appreciation Mortgage was sown.

	Owner occupied	Private rented	Housing association rented	Public rented	Total
1960	7.0		5.2	4.4	16.6
1970	9.6		3.8	5.9	19.2
1975	10.6		3.1	6.2	19.9
1980	11.7	2.4	0.4	6.5	20.9
1985	13.2	2.3	0.5	5.8	21.8
1990	15.1	2.1	0.7	5.0	22.9
1995	15.9	2.4	1.0	4.5	23.8

Stock of dwelling by tenure in the UK (in millions)
Department of the Environment

When Merrill Lynch's management felt that, while quite exciting, such a product would not fit into their existing product portfolio, Craig decided to look for takers of his idea elsewhere. When the Swiss Banking Corporation (SBC), one of the companies he approached, were immediately interested, he decided to move there. Once at SBC he was looking for people to join his team, in particular for a person who would have knowledge of the UK mortgage and capital markets. David Garner, who had previously been with a building society and had joined SBC in late autumn 1995, fitted the bill perfectly. Over the next months David and Craig worked on putting the product

together and seeking legal opinion. Quite soon the idea emerged that homeowners could perhaps give up a share in the appreciation of their property in return for a fixed-term, low-interest mortgage. The second part of the equation would be an investment vehicle that gave investors access to the shared appreciation in return for their investment, which would be paid by homeowners.

Competitive products at the time

Common Home Income Plan: allows people over 69 to remortgage up to £30,000 of capital from their homes and buy an annuity; part of the income from that is used to repay the loan, set at a fixed rate for the rest of the borrower's life, and part is paid as income to the person concerned. But the income is limited. A woman of 75 would receive only around £1240 a year or £1400 if a non-taxpayer.

Home Reversion Scheme: involves selling all or part of the property at a discount to its full value in return for a cash lump sum (or, in some cases, annuity) and rent-free occupancy for life. Upon death, the buyer becomes owner or part-owner. The price paid depends on how long the buyer waits for the property – and that will depend on how long the owner lives. A 70-year old selling his entire property would get 40% of its value now; an 85-year old would get 55%. The rest is kept by the provider because it might have to wait many years for the home to be sold.

While it was important to secure support from SBC, having an investment bank willing to take the idea forward would not be sufficient, a mortgage lender would be needed to market and manage the mortgages. As Craig and David were looking for a mainstream, respected lender with a solid reputation, they started talking to building societies. But they also talked to the retail-oriented banks. Amongst these was the Bank of Scotland, which was not only highly reputable but also considered to be innovative. They had been the first to introduce pension-backed lending stabilizers and special status lending. As John Lloyd, Director of Sales, Mortgages commented later, 'We are amongst the top 10 lenders, but are nevertheless thinking of ourselves as a niche player. We are not competing solely on price but on product differentiation and quality of service. We want to be known as an innovative and specialist lender.'

Corporate Statement (from BoS Report & Accounts 99)

The Bank of Scotland Group aims:

- To meet customers' needs by providing friendly, prompt, professional and imaginative service
- To deliver a range of distinctive financial products and services throughout the United Kingdom and internationally
- To train, develop, inform, encourage and respect staff so that they can perform an effective and fulfilling role
- To maintain its reputation for integrity and stability
- To make a particular contribution to the cultural and economic prosperity in the local communities in which it operates
- The achievement of these aims will result in long-term growth in profits and dividends for the benefits of its proprietors

Craig's first contact at the Bank of Scotland in February 1996 was Willie Donald, who had recently joined the bank as Director of Sales. Willie immediately took to the idea and decided to go right to the top to George Mitchell, Divisional Chief Executive of Personal Banking via George While, Head of Mortgages, knowing that management was always willing to listen to new ideas. They too liked the idea, and George Mitchell felt that such a product could enhance their reputation as an innovator in the mortgage market. For the same reason he felt it would be a good idea to put the concept to the main board, who after some consideration gave their approval in principle in June 1996. Sanctioning from the top was important for another reason; they had been working on a new product for about the past year, and it was clear that the bank would not be able to resource and support both projects. John Lloyd, who had been with the bank for a long time, was on the project team and succeeded Willie later in the role of Director of Sales. He commented, 'Had Craig approached me at the time I would probably have said no. The current business was being very successful with high levels of growth and I would have feared that resourcing/servicing might become an issue.'

GETTING STARTED

The SBC and the Bank of Scotland reached agreement to cooperate quite quickly with broadbased letters of intent being signed at the outset. After that the Bank of Scotland set up a team for the development and implementation of the product. When George Mitchell thought about who should work alongside Willie to take the concept further, Neil Forrest came to mind. Neil had been with the bank for about 7–8 years, and needed a new challenge. With his expertise in securitization, mainly purchasing MBS notes for BoS, he would complement Willie well, who had just successfully completed the introduction of the Personal Choice Mortgage. Neil remembers, 'I came from structured financing into retail, which meant that I could ask "stupid" questions which challenged everyone and made them think.' He continued, 'Within our small group Craig and Willie were the visionaries, they would dream things up, many of which would not work – but that did not matter. We all got to know each other very well in the process. David Gamer and myself were more on the technical side, translating their ideas into something realizable.'

After Neil joined the team in March 1996 they spent about 4–5 months going down what Neil now describes as a blind alley. 'But,' he continues, 'We learned many lessons from it that were very useful later on. And despite having spent quite some time going down the wrong track the top management still had the vision and belief in the product so we got another try.' The first version of the product had not involved securitization. One reason was that securitization had a bad reputation – one only did it if one could not afford direct financing. Another that the interest rate swaps originally suggested would have meant that the bank would have retained a substantial taxation risk, which they did not like. By the time SBC suggested securitization again, the Bank's executive was quite excited about the retail product, and so decided to give the go ahead.

Once the concept was finalized, Neil and Willie presented to the senior management team, just in time for a board meeting in September 1996 where the product was approved. After that, Neil and Willie sat down together to decide who should be on the implementation team, but asked George White to actually nominate the people. Neil recalls, 'Initially people had to be told to show up to the first meeting, but when they found out about the product they got quite excited about it and really wanted to be involved. Everyone was clear about what we were trying to achieve, we might have had plenty of arguments along the way, but in the end everyone did what was necessary to make the product happen.' The implementation team, also referred to as steering group, was pretty senior, consisting of:

- Willie Donald and Neil Forrest, responsible for the product
- Ian Dickson and John Lloyd, sales

- John Trouten, customer care
- Dave Smith, process area
- Three people from systems

Meetings were held on a weekly basis, with interim meetings taking place if and when required. Gary Gordon, Manager, Operations at the time, joined the team after their first meeting in early October 1996. Meeting notes were copied to all heads of functions and regular progress reports were given to the board. In addition to the implementation team, a second team was dedicated to developing the processes surrounding SAM (Shared Appreciation Mortgage), as the product was called.

Throughout the development, confidentiality and timing were a concern. To ensure that as little as possible about the product would be known before the launch, the development area within the Bank of Scotland was declared restricted access. At the same time, there was agreement that informing all relevant audiences simultaneously – staff, intermediaries, branches, financial advisors, etc. – would be very important. During the first steering group meeting, 25th September 1996, the launch date was set for 4th November 1996.

PRODUCT AND MARKETS

Once the concept had been signed off, the team quickly decided to focus on two different types of interest rates only. John said, 'Two interest rates were sufficient for the launch as we were trying to keep things as simple as possible given some of the product features were complicated enough to communicate as it was. In fact, initially we asked that applicants seek advice from a financial advisor or a solicitor to ensure they really understood what they were signing. Applications that came without the input of a financial advisor were sent back. On the insistence from the executive, we also included sentences to make sure the customer really knew in return for a low interest rate they would forego some of the future appreciation in their property in both the approval in principal and the formal offer letters.'

Bank of Scotland SAM Product Criteria

- Lifetime fixed interest of either 5.75% or 0%
- Shared appreciation levels depending on choice of interest rate
- 5.75% interest rate – maximum loan to value is 75%, the shared appreciation level is equal in proportion to the percentage loan to value (1:1)
- 0% interest rate – maximum loan to value is 25%, the shared appreciation level is three times the loan to value (3:1)
- Purchase or remortgage – repayment method interest only
- Properties without existing mortgages accepted
- Minimum/maximum valuation £60,000/£500,000 (higher values may be considered on an individual basis)
- Minimum/maximum loan is £15,000/£375,000 (higher values may be considered on an individual basis)
- Arrangement fee of £500 which can be added to the loan

- No maximum term
- No maximum age
- Partial redemptions – minimum £10,000
- Early repayment fee if the mortgage is redeemed within the first three years: 5.75% SAM – 3 months gross interest, 0% SAM – 1.5% of loan
- Termination charge – administration fee of £300, plus the cost of the sale valuation to establish the level of appreciation

Strongly influenced by sales' point of view, the two scenarios chosen were (a) a 0% mortgage where the borrower could borrow up to 25% of the value of the property and would give up future appreciation worth three times the percentage borrowed (i.e. a maximum of 75%), and (b) a 5.75% mortgage – which was very competitive at the time – whereby the homeowner could borrow up to 75% of the property value, foregoing future appreciation at a rate of 1:1. Any improvements on the house would be discounted from the appreciation calculations; to calculate this, homeowners would have to inform the bank in advance of any major improvements made to the home. As the product was designed with specific customers in mind, people who would want either to remortgage or raise capital, they were expecting to get a customer profile of asset rich, cash poor. They were also expecting to see lots of old people, who needed to top up their pension, interested in the product. For that reason, consultations with Help The Aged and SAGA had taken place throughout development. Neil commented, 'We did not market test but rather relied on input from our sales people and other experts.'

For the investor side the product would work as follows: the 5.75% SAMs would be securitized into fixed-rate notes with a coupon of about 55% of the 10-year gilt yield. The zero-interest SAMs would be securitized into floating-rate notes with a coupon of about 60% of three month Libor. According to SBC's marketing literature, 'Trading in the familiar form of Eurobonds, SAMs offer all the benefits of involvement in residential property, with some protection from downside property exposure.' Coupon payments to investors would be made on a quarterly basis, and would consist of a fixed or floating element plus a supplemental interest element to reflect price gains for SAMs terminated that quarter; in addition, debt would be amortized each quarter as the number of underlying homes in any SAMs pool would become smaller. Willie Donald commented, 'The step-up coupons were designed to offer some attraction to investors who were buying something without a fixed maturity; but we were calculating on the basis that it would amortize after 25 years.' The issuer had the option to sweep up the paper should the note size outstanding fall below 20% of the original total, or if a withholding tax were imposed.

	Equities	Government bonds	Residential property
Return	15.1%	7.5%	8.4%
Volatility	20.4%	11.3%	4.9%
SBC Warburg Dillon Reed			

With SAMs being like equity but less risky, it was thought that they should be attractive to pension funds. A SAM would be long term and earnings linked, rather than being linked to the RPI. Craig felt that the product could enable pension funds to manage their long-term liability and improve earning power. In *Euromoney* December 1996, Craig commented on potential takers for the bonds, 'Pension funds should be interested, because historically house prices have not only outperformed inflation, but matched increases in earnings. Most pension fund liabilities are earnings linked. Property funds should certainly be interested. And there's enough equity in the bonds to encourage some

equity investors as well, although the mortgages are being sold on the basis that stock markets have historically outperformed house prices.'

Main features of SAMs

- Asset diversification into a significant asset class
- Upside exposure to a superior performing asset on a risk-adjusted basis
- Asset/liability matching by means of an excellent wage inflation hedge
- A legally efficient and cost-effective means to enter the owner-occupied residential property market
- Joint economic interest to preserve the value of the home
- Greater diversification than direct investment
- Extra value derived from a 'portfolio of options' effect
- Direct support of and investment in the local housing market

The Bank of Scotland would be taking no interest in the loans; 100% of debt and equity would go to bondholders, with the Bank of Scotland receiving a fee. SBC released one issue per company. A separate book ID on the BoS system would enable tracking of transactions between companies. The money from the mortgages coming into the Bank of Scotland would get cleared on a monthly/weekly basis to SBC. At the time, SBC was one of the few financial institutions that had a triple A rating, the highest. It effectively stated that the likelihood of default was very slim. (At launch all SAM notes were AAA rated.) In the absence of a suitable model, initial pricing for the bonds was based largely on SBC's research, which incidentally also indicated high levels of interest from investors in the SAM bonds.

To keep funds associated with the SAMs separate from its main books, the Bank of Scotland set up an independent company for each SAM, with the Bank of Scotland acting as an agent for the BoS SAM (legal charges were in the name of the BoS SAM rather than the BoS). For the Scottish SAMs special arrangements were needed: a special service vehicle company was set up which originated both rated and zero SAM; the two books were sold to SAM 3 and 4. The company was not involved in the securitization, but sold to one of the English companies which then securitized the assets.

TRIALS AND TRIBULATIONS

During development and implementation, the team had to be aware of a number of acts and regulations. For example, they needed to ensure that the offering would not be in conflict with the Betting Act. Then there was the risk that, while interest might be legally enforceable, the appreciation aspect was not likely to be. Many of these issues had been identified during the first session, where the team had a brainstorming session about what things could go potentially wrong. While many of the possible problem scenarios were familiar from previous projects and the team had the bank's new product development process and internal check lists as reference points, for example the Critical Sheet for Actual Lending, there were a number of issues no one had encountered before.

During their second meeting in early October, the IT people alerted the implementation team to the fact that Unisys, one of the bank's IT systems on which all accounts would be domiciled, and through which all transactions were managed and recorded, would only accept loans up to 50 years, no longer. With the SAM set up as an open-ended mortgage – until death (or sale) – this was potentially a problem. But this was not the only IT-related

challenge. Unisys would not accept an interest rate of 0%. The suggestion to run SAM with 0.0001% interest, which would have meant that no statement would be issued, was not acceptable, as it would still have had an impact on the account. With a separate company for each of the SAMs there was a concern that processing, which was done overnight, might overrun, particularly at the end of the month. The decision to upgrade processing capacity was made quickly. Setting up a standalone system for mortgages on Unisys had the advantage that they would not be affecting the mainframe, and would avoid any loss of time and interference with priorities.

The team was aware that, due to the fact that the SAM would be externally securitized, they would have to design the infrastructure for SAM in such a way that would make it distinct from BoS with a clear and separate audit trail. Normally, most documents would be microfilmed, and only some key documents would be kept. But this was seen not to be sufficient for SAMs; they would have to satisfy external auditing requirements; this drove decisions on what kind of documentation would be required and for setting up separate companies. They even chose a special colour for the folders so they would be easily identifiable.

With appreciation being calculated on the difference between the initial valuation and exit valuation, valuations were an important issue. Countrywide was appointed to administer the panel of valuers who would provide all valuations.

During the team meeting on the 9th October, it was decided to launch on the 11th of November and announce the launch in the *Sunday Times* on the 4th November 1996 – the team was quite positive that this would be front-page news.

MARKET INTRODUCTION AND REACTION

The deal represents the first chance for many institutions to gain access to the £850 bn pool of UK housing equity, rather than the housing debt market.

Euroweek 6th February 1996

It would make sense for individuals to own less housing, and for institutional investors, such as pension funds and insurers, to own more (they now own almost none).

Economist 17th January 1997

As no similar product had existed before George White decided to inform many of BoS's large intermediaries directly about the product. As the magazine *Euromoney* pointed out in their article of December 1996, 'It isn't like anything the capital markets have seen before.' The article continues by quoting Craig Corn: 'It's a convertible bond wrapped up in a securitisation vehicle; it's a property-linked bond; it's an equity securitisation; it's a mortgage-backed security; it's equity in retail housing; if I had to pick one bond which it was like, I'd say it was most like an index-linked gilt, linked to house prices instead of inflation.'

The team also made sure that marketing material would be available to intermediaries ahead of the launch. Several other steps were taken in preparation of the launch: people were nominated to man the phones within the bank's mortgage area on the day of the press release, which was a Sunday; more people had to be added when it turned out that telephone calls would last up to 45 minutes – rather than the 2–3 minutes normally spent on customer enquiry calls. A memo was sent out requiring all enquiries to be forwarded to the dedicated team within the mortgage area. The board was also kept fully informed, and had asked that nothing be released that had not been approved by them.

By the time the product was launched – which was actually before contracts with SBC Warburg had been finalized or terms and conditions had also been copy written – the bank was already receiving around 2000 phone calls per day, the majority of callers being interested in the 0% option. The interest had been stirred prematurely by a press leak in a Sunday paper on the 20th of October, which had put additional pressure on the team to launch – and which had meant that by the time the product was launched, the bank had already a database with about 2500 individuals who had requested information on the product. Demand far outstripped what the team had anticipated, and by the second week of December they had run out of brochures. The first two tranches were launched in England with the first moneys drawn on the 31st of December 1996. The team at the Bank of Scotland was quite keen to keep the momentum going and launch the following tranches as quickly as possible.

But not only were the borrowers keen on the new product, most of the press wrote enthusiastically, and the Warburg^[1] first issue was, in fact, oversubscribed. For the 5.75% option, the BoS SAM 1, bonds worth £27.2m were issued, for the 0% option, the BoS SAM 2, bonds worth £105.6m. However, pension funds were not amongst the takers.

From Internal BoS Memo to All Sections

All enquiries should be diverted to the business development teams who have been briefed and have in-depth details of the product. As far as existing customers are concerned they should be transferred to the SAM implementation team, who will respond as follows:

'SAM is a new product and concept and at the present time there is a limited amount of funds available for this. Consequently it is not available for existing customers but it is our intention to review this after 6 months once we have had some experience of the likely demand and availability of funding which is provided through issuing Eurobonds. I would also mention that in the event this does become available to you, any transfer will involve a full remortgage with all the costs associated with this such as legal costs, valuation and arrangement fees given the mortgage is only available through a separate subsidiary of the Bank which has its own documentation.'

AFTER THE INITIAL ENTHUSIASM

Shared appreciation mortgages, a way of selling part of a property while continuing to live in it, are temporarily off the market after demand from borrowers outstripped the supply of money from the bonds market. Demand for the bonds has dried up after £750 m worth from the Bank of Scotland plus a first launch of bonds from Barclays, which offered a SAM briefly this year.

Financial Times 11th July 1998

While the bank's new product had caused great interest from borrowers, after just having lived through the problems of the pension funds, intermediaries were much more sceptical. As the bank received many calls from borrowers who felt quite strongly that they were quite capable of making decisions without legal advice, the bank decided to relax its requirement for applications to come through intermediaries. To their surprise, applicants were also more often than not asset rich as well as cash rich, and they received several requests for what Willie Donald termed 'jumbos', huge properties. They also received calls from homebuilders building retirement homes who were enquiring on behalf of their customers, a group that had not been anticipated. In addition, the age profile was different from what had been anticipated; applicants tended to be in their fifties and sixties rather than seventies, and they found that many Muslims were interested in the 0% option.

With interest from borrowers unabated, investor interest began to slacken after the first two issues. The bank had been keen to maintain the momentum, but SAMs 3 and 4 could not be launched until securitization of SAMs 1 and 2 had been completed because of limited warehouse funding lines. Also, due to the different legal system in Scotland, introduction of the product had to be delayed, and it was not until mid-February 1997, with financial crises looming in Asia and Russia, that the SAM was introduced in the bank's home country. This coincided with the launch of tranches 3 and 4. While the emphasis had originally been on the innovativeness of the product and the great potential of the housing market at the time, the following tranches tried to present the SAM as an established product that was there to stay.

But how interested will investors be in the securitization of an asset with no track record because it has not existed before.

Euromoney December 96

Tranches 3 and 4 took much longer to place, and tranches 5 and 6 had to be taken up by SBC Warburg itself, despite the fact that, based on Halifax house price indices, it could be expected that BoS SAM1 would have a return of 4.3% and BoS SAM2 a return of 4.4% against an overall increase of 3.4% in the UK as a whole. During the preparations for the issue of SAMs 5 and 6, SBC Warburg went through the merger with UBS, and while the team at the Bank of Scotland was hoping SBC Warburg/UBS would find a way to interest investors in the product, in the end, they had to take the product off the market. Within the bank Neil, as Director of Product Development, was given the remit by top management to pursue the idea for a further year, and to expand the product development department.

Craig Corn in *Euroweek* 18th July 1997: 'We have been educating investors about a whole new asset class. This deal is a hybrid, and the job has been to find the part of an institution which will buy it.'

COMPETITORS' REACTION

While applauding the ingenuity of the project, rival bankers said many hurdles needed to be overcome before the bonds could see the light of day. Some structuring issues were within the compass of SBC Warburg, such as coming up with a model that would convince investors they could accurately predict the rate at which mortgage holders paid off the loans – a crucial component of measuring return on asset-backed securities.

Euroweek 15th November 1996

Corn predicted that some of the UK's top 10 lenders would launch rival products in the second half of the year with a view to securitization in 1998.

Euroweek 18th July 1997

In March 1998, after the Bank of Scotland had taken their product off the market, Barclays Capital launched their first securitization of shared appreciation mortgages with a 98m triple-A rated zero coupon bond. The Millshaw SAMs No 1 Ltd issued a 55-year deal that was backed by 3253 first charge mortgages that Barclays had signed up between May and July 1998. These loans had a maximum loan to value ratio (LTV) of 25%. Like BoS SAMs 2, 4 and 6 no interest was charged, but once borrowers sold their house, paid off the mortgage or died, they would have to surrender a share in the appreciation of the value of the property, calculated as three times the LTV. While progress was slow, Barclays found that institutions were buying the bonds for their high returns. If real property inflation ran at 2%, slightly below its long-term average of 2.2%, and retail inflation were 2.5%, Millshaw would yield 7.8%, around 330 bp over gilts. Barclays expected that any significant growth would only come with familiarity and that a retail bid for the assets could eventually play a part in making this theoretically persuasive market a reality.

QUESTIONS

1. What would your advice have been to both the Bank of Scotland and UBS Warburg after the issue of SAMs 3 and 4?
2. Do you consider the product to be a success or failure (a) from the BoS perspective, (b) from UBS Warburg's perspective, and why?

APPENDIX I: ADDITIONAL INFORMATION

- The time available to applicants to accept a mortgage offer set at 14 days, three months was normal; they decided to cut it to maintain a tight control of the money going out, as there were only certain funds available for each phase
- After acceptance, borrowers had six weeks to draw the funds; normally they could do that any time – for the same reason as above
- Allocation was on a first come, first served basis
- For normal mortgages they have a 60% conversion rate (from offer to being drawn); for SAM they had a 95% conversion rate; disagreement with valuations was the only reason that led people to withdraw
- Borrowers were expected to meet all valuation costs (at outset, in between in case of home improvements, etc.)
- No proof of income was required for the 5.75% mortgage, as applicants had to go through intermediaries who were expected to be able to judge whether the people were creditworthy or not; the requirement was not reinstated even when the intermediaries were no longer required
- No life cover was required for the 0% option; for the 5.75% option it had initially been required but was later waived
- The APR for the 0% was 8.6% and 8.9% for the 5.75%
- It was not possible to add dependants onto the mortgage
- Borrowers were required to undertake any major repairs before the initial evaluation
- If people wanted to make improvements to their property, they had to inform the BoS beforehand; valuers, paid for by the borrowers, would assess what percentage of future appreciation would be due to the improvement so it could be deducted on exit

NOTES ON CHAPTER 23

[1] Warburg merged with UBS in 1998.