Options for Short-term Credit in the United Kingdom

Shahram Sharifi
Chartist Research

and

G. Michael Flores
Bretton Woods, Inc.

December 2012

Abstract

Despite high and growing demand in the UK for personal unsecured loans of less than £1,000, high street banks do not offer such loans. We explore the barriers that preclude banks from adding small-value loans to their product lines, in competition with other unsecured credit products provided by alternative financial service (AFS) providers. We look to the future of the consumer-financial-services market, which will include mobile-based services that provide the convenience consumers increasingly demand. Finally, we demonstrate that alternative financial services, including payday loans and overdraft credit, are valued by, and generally beneficial to, low-to-moderate-income (LMI) consumers. Given the absence of superior substitutes and the growing demand for such credit, future regulation should be narrowly tailored to ensure fairness and transparency while maintaining, if not expanding, the options available to consumers.

Number of Pages: 26

Keywords: low-to-moderate income consumer, low-value credit, short-term credit, home credit, credit card, overdraft, payday loan

JEL Classification: D14, D18, G21, G28

Introduction

Low-to-moderate income (LMI) UK consumers are generally excluded from access to low-value, short-term unsecured credit from high street banks. We investigate the availability of unsecured consumer credit to LMI consumers in the UK and the role of "legacy"[1] high street banks and alternative financial services (AFS) providers in this market. We also analyse the evolution and benefits of mobile delivery of services to LMI consumers by AFS providers.

Excluding student loans, total consumer credit from banks has declined for the past three years, but analogous credit has increased from non-bank consumer-credit lenders. Since August 2010, the value of consumer loans outstanding has decreased a remarkable 16 percent at traditional banks, while increasing 3.5 percent at other consumer lenders.[2]

We discuss the state of the UK banking industry and its inability to offer individually underwritten, low-value, short-term credit to consumers. We ascribe this inability primarily to two factors: the industry's legacy cost structure, and the cost impact of compliance with regulations, including Basel III.[3]

We compare various short-term consumer-credit products available in the UK and discuss pricing relative to risk and return. We demonstrate that high street banks' traditional business model cannot profitably deliver small-value short-term consumer at prices that do not pose substantial reputational risks. Additionally, we review the evolution in banking ser-

[1]Refers to traditional institutions with ingrained cost structures and established corporate cultures.

[2]Bank of England (30 August 2012). Bankstats (Monetary & Financial Statistics) July 2012. Retrieved from: http://www.bankofengland.co.uk/statistics/Pages/bankstats/2012/Jul12/default.aspx. See Table 1 - Consumer Credit Outstanding, page 26. Outstanding unsecured consumer credit lending stood at a revised £157 billion at the end of July 2012, down from £177 billion at the end of August 2010. By way of comparison, outstanding borrowing in 1993 was just over £50 billion.

[3]Basel III is a global regulatory standard on bank capital adequacy, stress testing and market liquidity risk agreed upon by the members of the Basel Committee on Banking Supervision in 2010, and scheduled to be introduced from 2013 until 2018. Briefly, Basel III requires banks to assign varying amounts of capital based on the risk-weighting of the underlying asset. That is, the riskier the asset (loan), the more capital that must be allocated to support the loan. See, generally, KPMG, (2011), Basel III: Issues and Implications. Pages 4 and 5. Retrieved from: http://www.kpmg.com/MK/en/IssuesAndInsights/ArticlesPublications/Brochures/Documents/basell-III-issues-implications.pdf

vices to electronic delivery of products and services to meet the expectations of younger consumers as well as the LMI market.

The UK consumer credit market is one of the most highly developed and sophisticated in the world, diverse both in types of lenders and in the forms of available credit. The UK has the most market-based approach to credit regulation;[4] and therefore, it enjoys the largest consumer credit market in Europe.[5]

The use of unsecured consumer credit has exploded in UK in the last twenty years, accompanied by a shift in attitudes. Whereas in the past, credit was used to fund larger expenses or a certain project (e.g., a car, a home, or a new kitchen), it is now a part of everyday life.

We find that LMI consumers use a variety of forms of unsecured, low-value, short-term credit. Traditional financial institutions, however, do not offer these loans, with the exception of credit cards and overdrafts. These open-end products, while useful, do not meet specific needs with specified repayment terms. High street banks do not individually underwrite unsecured personal loans in amounts under £1,000, and most do not offer these loans for less than £5,000 to £7,500.

AFS providers are stepping into the void with traditional and mobile-delivery credit products with loan amounts under £1,000 that address the unique circumstances of LMI consumers.

[4]Policis (2006), Economic and Social Risk of Consumer Credit Market Regulation: a comparative analysis of the regulatory and consumer protection frameworks for consumer credit in France, Germany and the UK, Page 18. Retrieved from: http://www.policis.com/pdf/credit/Economic percent20and percent20Social percent20Risks percent20of percent20Consumer percent20Credit percent20Market percent20Regulation.pdf

[5]Department for Business Innovation and Skills (March 2010), Implementation stage impact assessment for the Consumer Credit Directive, Page 11. Retrieved from: http://www.bis.gov.uk/assets/biscore/consumer-issues/docs/10-916-implementation-impact-assessment-consumer-credit-directive

Consumer Credit Situation Assessment

There is a strong, diverse and highly competitive credit market in the UK, which is the largest and fastest-growing consumer-credit market in Western Europe.[6] The growth of this market derives from the UK's "soft" approach to consumer-credit regulation. The UK generally allows prices and terms to be determined by market forces, while emphasizing full disclosure and fair dealing. In contrast, other European countries have significantly limited the supply of consumer credit by capping prices below lenders' costs, or by limiting the forms of credit to those that can only be profitably provided to wealthier consumers.

The primary forms of unsecured credit used in the UK,[7] which are ranked by the number of households utilizing these sources, include credit cards and authorized overdrafts, as well various high-cost credit forms (unauthorized overdrafts, home credit, payday and pawnbroker loans).

The use of unsecured credit has declined since 2008 in all categories except high-cost credit. A deeper analysis of usage by type of product and user demographics indicates:

1. Overdrafts, friends and family, home credit and social fund loans are the most used sources for the people in the lowest 20 per cent of household income.[8]
2. Overdrafts are the primary source of all credit (over 40 per cent usage) for LMI consumers.[9]

---

[6]Policis (London: 2006). Economic and Social Risks of Consumer Credit Market Regulation, 18, 88. Retrieved from: http://www.policis.com/pdf/credit/Economic percent20and percent20Social percent20Risks percent20of percent20Consumer percent20Credit percent20Market percent20Regulation.pdf

[7]BIS Department for Business Innovation & Skills (July 2012). Credit, Debt and Financial Difficulty in Britain, Page 13. Retrieved from: http://www.bis.gov.uk/assets/biscore/consumer-issues/docs/c/12-948-credit-debt-financial-difficulty-in-britain-2011

[8]Credit and low income consumers – A demand-side perspective on the issues for consumer protections: Policis, Page 29, Retrieved from: http://www.friendsprovidentfoundation.org/reports.asp?itemid=312&itemTitle=Credit+and+low-income+consumers percent3A+a+demand-side+perspective+on+the+issues+for+consumer+protection&section=24&sectionTitle=Reports

[9]Credit and low income consumers – A demand-side perspective on the issues for consumer protections: Policis, Page 28. Retrieved from:

3. Home credit loans (over 15 per cent usage) are more likely to be used by benefit recipients,[10] who account for 42 per cent of total home credit users. In contrast, payday loans are the fourth-highest source and primarily used by consumers (94 per cent) who are employed on a full-time basis with incomes in the 20th to 50th percentiles.[11]
4. Home credit loans were used more for entertainment and holiday purposes and spreading the cost of purchasing a major item. The greatest use of payday loans was for unanticipated or emergency needs.[12]

Both overdrafts and payday loans require the consumer to have a current account. Payday loans and overdrafts tend to be used interchangeably.[13] A common feature of both products is relatively small value (under £300) and very short terms (under 30 days).

A comparative analysis (Table 2 - Consumer Product Matrix
) of the basic alternatives for small value, short-term credit products outlines credit products for unanticipated needs and follows through with products, both secured and unsecured, for anticipated needs with loan duration and commensurate benefits and risks.

We review the costs, benefits, risks and availability of these products. The conclusion is that each product serves a unique need of the consumer. Elimination of any of these options could force consumers to inferior substitutes and potentially increase the costs they incur.

---

http://www.friendsprovidentfoundation.org/reports.asp?itemid=312&itemTitle=Credit+and+low-income+consumers percent3A+a+demand-side+perspective+on+the+issues+for+consumer+protection&section=24&sectionTitle=Reports

[10] Includes pensions and a variety of government sponsored programs. See https://www.gov.uk/browse/benefits

[11] Policis (2011), Credit and low-income consumers, a demand-side perspective on the issues for consumer protections, Page 29. Retrieved from: http://www.friendsprovidentfoundation.org/reports.asp?itemid=312&itemTitle=Credit+and+low-income+consumers percent3A+a+demand-side+perspective+on+the+issues+for+consumer+protection&section=24&sectionTitle=Reports

[12] Credit and low income consumers – A demand-side perspective on the issues for consumer protections: Policis, Page 31. Retrieved from: http://www.friendsprovidentfoundation.org/reports.asp?itemid=312&itemTitle=Credit+and+low-income+consumers percent3A+a+demand-side+perspective+on+the+issues+for+consumer+protection&section=24&sectionTitle=Reports

[13] Flores, G.M. (2010). Fee Analysis of Bank and Credit Union Non-sufficient Funds and Overdraft Protection Programs, Bretton Woods, Inc. Retrieved from: http://bretton-woods.com/media/3dba14ccfd97117fffff82a5ffffd523.pdf

Unsecured Loan Options

Product Demand

The 2011 census estimate[14] for England and Wales indicates there are 56 million individuals in 23.4 million households. With respect to the use of credit,[15] 69 per cent of consumers in the lowest 50 per cent of household incomes (10 million households) are credit users, with 20 per cent of these individuals needing to borrow less than £50. There are 3.3 million LMI consumers who use authorised overdrafts, with an additional 1 million using unauthorised overdrafts, 3.1 million LMI credit card users, 2.4 million home credit users and 1.3 million payday loan users.[16] Fifty-three per cent of LMI consumers use two or more products.[17]

Product Supply

Credit Cards. Although credit cards offer unsecured credit, the economic downturn has caused many consumers to reach their credit limits, and card issuers have at once reduced credit lines to existing consumers while limiting new lines to the most creditworthy consumers. Access to new credit cards has been constrained by the financial fragility of many consumers. LMI consumers represent 15 percent of all cardholders, or 3.1 million consumers, with balances totaling £6.2 billion (11 percent) out of total card balances of £58.3 billion.[18]

---

[14]2011 Census (24 September 2012). Population and household estimates for England and Wales – data published 11 July 2012. Retrieved from: http://www.ons.gov.uk/ons/rel/census/2011-census/population-and-household-estimates-for-england-and-wales---unrounded-figures-for-the-data-published-16-july-2012/rft-1-2-ew-fact-file.xls

[15]Ellison, A. (2011). Credit and Low-income Consumers: A demand-side perspective on the issues for consumer protection. Pages 6, 7. Retrieved from: http://www.friendsprovidentfoundation.org/core/core_picker/download.asp?id=200&filetitle=Credit+and+low percent2Dincome+consumers+ percent2D+A+demand per-cent2Dside+perspective+on+the+issues+for+consumer+protection percent3A++Policis+ per-cent28NB+LARGE+FILE percent29

[16]See

Table 3 - Consumer Credit *Users*, page 27

[17]BIS, Credit, Debt and Financial Difficulty in Britain (2011), Page 61. Retrieved from http://www.bis.gov.uk/assets/biscore/consumer-issues/docs/c/12-948-credit-debt-financial-difficulty-in-britain-2011

[18]Ellison, A. (2011). Credit and Low-income Consumers: A demand side perspective on the issues of consumer protection, Pages 8, 9. Retrieved from:

While the nominal interest rate for credit cards is low compared to AFS credit, many LMI consumers only make minimum payments over protracted repayment periods, ultimately costing much more for the original credit issued than the consumer may have intended. In addition, LMI consumers incur a disproportionate share of behavioral charges (including late and over-the-limit fees), which further increase the true cost of their credit.

Personal Loans. A web search of the five major high street banks found that all offer personal loans from a stated low of £1,000 to a high of £25,000, with terms that vary from one year to seven years. The specific loan terms are:

- RBS[19] - £1,000 to £15,000 - 1 to 5 years term
- Santander[20] - £1,000 to £20,000 - 1 to 5 years term
- Barclays[21] - £5,000 to £25,000 - 2 to 5 years term
- HSBC[22] - £7,000 to £15,000 - 1 to 5 years term
- Lloyds[23] - £7,500 to £25,000 - 1 to 7 years term

None of these banks offered loans in principal amounts under £1,000.

Finally, a web search of unsecured personal loans[24] yielded 46 products (some multiple products from common providers) with an average minimum loan amount of £3,400.

Overdrafts. An "authorised" overdraft is underwritten for the holder of a current account and specifies a credit limit at an established interest rate. A monthly fee may also be charged

---

http://www.friendsprovidentfoundation.org/core/core_picker/download.asp?id=203&filetitle=Credit+and+low percent2Dincome+consumers percent3A++a+demand per-cent2Dside+perspective+on+the+issues+for+consumer+protection+ percent28SUMMARY+ per-cent2D+revised+January+2012 percent29 percent3A+Policis

[19]Retrieved from: http://www.rbs.co.uk/personal/loans.ashx

[20]Retrieved from: http://www.santander.co.uk/csgs/Satellite?canal=CABBEYCOM&cid=1237918154384&cidAgrup=845616358929450&empr=Abbeycom&leng=en_GB&pagename=Abbeycom percent2FPage per-cent2FWC_ACOM_ViewSelector&posSel=1

[21]Retrieved from: http://www.barclays.co.uk/Loans/Ourloans/Personalloans/P1242557963928

[22]Retrieved from: http://www.hsbc.co.uk/1/2/loans/personal-loan?HBEU_dyn_lnk=?HBEU_dyn_lnk=Borrowing_Homepage_PersonalLoan_Link

[23]Retrieved from: http://www.lloydstsb.com/loans.asp

[24]Retrieved from: http://www.money.co.uk/loans/unsecured-loans.htm

for the facility. An “unauthorised” overdraft is much more expensive, and payment at the discretion of the bank in each instance. Fees can include a charge for each day (sometimes the number of days is capped) the account is overdrawn plus a monthly usage fee and interest for the amount outstanding.

Seven per cent of unauthorised overdrafts occur weekly and another 19 per cent occur monthly. Half of users are overdrawn two days or less, and another 33 per cent are overdrawn three days to one week. Finally, 53 per cent are overdrawn less than £50, and another 20 per cent are overdrawn between £50 and £100.

Based on these data, the cost of unauthorised overdrafts can be summarised by the following table:

Type	Amount (£)	Period (Days)	Interest Charged (£)	Penalty Fees and Charges (£)	Total Cost of Credit (£)
Unauthorised	50	2	0.05	25	25.05
Unauthorised	33	7	0.12	75	75.12
Unauthorised	11	30	0.17	85	85.17

Home Credit. Home-credit lending is well established in the UK. It is the largest of the AFS products, although growth is minimal. The business model relies on agents visiting the homes of borrowers to originate loans and receive payments.

Over half of home credit users are either part-time workers or benefits recipients. The primary purposes of these loans are for purchases or special events that are anticipated and where the credit requirement can be planned.[25] Other types of unsecured credit used by home credit users[26] are primarily catalogue shopping purchase/mail order loan (19.6 per cent) and authorised overdrafts (13.3 per cent). It appears that home credit users do not use payday loans to any significant extent, for reasons we discuss below.

---

[25]OFT Annexe C, Supplementary analysis from the OFT’s consumer survey and other sources of data (2010), Page 7. Retrieved from:
http://www.oft.gov.uk/shared_oft/reports/consumer_credit/High-cost-credit-review/OFT1232c.pdf

[26]OFT, Annexe C, Supplementary analysis from the OFT's consumer survey and other sources of data, (2010), Page 23. Retrieved from:
http://www.oft.gov.uk/shared_oft/reports/consumer_credit/High-cost-credit-review/OFT1232c.pdf

The cost of home credit is approximately £82 per £100 borrowed.[27]

Payday Loans. Payday loans arrived in the UK from the United States in the late 1990s. A web search[28] revealed 11 lenders with loans typically ranging from £100 to £1,250, terms from one day to 31 days, and rates per £100 borrowed ranging from £21.11 to £30. Loans are originated and serviced both at storefront retail locations as well as on the Internet. Storefront loan rates are typically lower than those of online lenders, costing £12.50 to £15 per £100 advanced. Rates for borrowers who have a history of paying as agreed tend to be at the lower end of the stated ranges.

Consumers' primary purposes for using payday loans were unanticipated bills or running low on money. Consumers appear willing to pay higher rates for payday loans from online lenders, as compared with the rates charged by storefront lenders, for the convenience of trading from one's home or office. One can impute the additional costs and time of travel to and from a storefront lender, thereby offsetting the cost differential between storefront and online providers. A current bank account and employment are required of the borrower. This is a key differentiator from consumers of home credit loans.

---

[27] Ellison, A., et al, Credit and low-income consumers, (2011), Page 9. Retrieved from http://www.friendsprovidentfoundation.org/reports.asp?itemid=312&itemTitle=Credit+and+low-income+consumers percent3A+a+demand-side+perspective+on+the+issues+for+consumer+protection&section=24&sectionTitle=Reports
http://www.friendsprovidentfoundation.org/core/core_picker/download.asp?id=203&filetitle=Credit+and+low percent2Dincome+consumers percent3A++a+demand per-cent2Dside+perspective+on+the+issues+for+consumer+protection+ percent28SUMMARY+ per-cent2D+revised+January+2012 percent29 percent3A+Policis

[28] Retrieved from: http://www.money.co.uk/payday-loans.htm

Cost Comparison

The cost of various forms of LMI credit is summarised below:

	Cost per £100		
Product	**Low End**	**High End**	**Notes – Upper End Costs**
Credit Card	£44	£115	Considers making minimum payments and behavioural charges
Home Credit	£82	£82	87 per cent of borrowers do not refinance
Payday	£17 (Store) - £25 (On-line)	**£51**(Store) - £75 (On-line)	Considers 2.1 rollovers
Authorised Overdraft	£10	£57	21 per cent of users who average seven fees per annum
Unauthorised Overdraft	£25.05 two days over-drawn	£55.26 5 days over-drawn	£10 per day of penalty + £5 of monthly usage fee + small amount of interest at 19.3 per cent Effective Annual Interest (EAR) rate

At the low end of the scale, authorised overdrafts are the least expensive, and home credit the most expensive. The upper end shows payday loans to be the lower cost, and credit cards are the higher cost.

Given actual usage patterns, we now provide a comparison by calculating the cost of the number of unauthorised overdrafts required to achieve the same credit extension of an average payday loan of £300.

Credit Option	£	Cost/Unit	APR/Unit	Units Required	Total Cost
Average Payday Loan	£300.00	£75.00	1,355 per cent	1	£75.00
Average Unauthorised Overdraft	£50.00	£25.05	12,979 per cent[29]	6	£150.30

It is clear that a consumer, with a known credit need of £300, will benefit by taking out a payday loan rather than an unauthorized overdraft – both in terms of cost of credit but also in terms of assurance of funds availability (that is, it is not certain that a bank will pay all of the presented debits into overdraft).

[29]APR's are not typically calculated for overdrafts. However, for comparative purposes, we calculate the APR assuming one month duration of the credit. Furthermore, we limit this calculation to a single unit.

Constraints on Banks

There are several reasons why banks do not offer short-term, low-value loans to consumers.

High street banks must serve their legacy customers who desire traditional ways to bank, and they must also serve the upcoming "Gen Y" consumers. The traditional customer base – older and with more assets – is clearly more profitable to banks than consumers just entering the market.

Established banks are generally handicapped by large distribution costs driven mainly by:

- Oversized branch networks[30]
- Inflexible legacy information technology systems[31]

Margin erosion, caused by increasing operating and regulatory costs, further exacerbates problems with the legacy bank business model.[32]

As noted above, Basel III requires banks to hold a higher quantity and better quality of capital against any lending undertaken.[33] The requirement for additional capital increases the cost to banks to write and hold loans, which increases consumers' costs to borrow and reduces the volume of lending. The risk-based component requires that a greater proportion of capital must be held against riskier loans. Accordingly, Basel III requirements favour lending to wealthier, more creditworthy borrowers and will reduce higher-risk lending to LMI consumers.

Beyond legacy and regulatory costs, and a need to support traditional service delivery options for established customers, high street banks are also faced with investing in new tech-

---

[30]The Guardian (July 2011), Bank branch network faces hundreds of closures. Retrieved from: http://www.guardian.co.uk/business/2011/jul/06/bank-branch-network-faces-hundreds-of-closures
[31]Montgomery, D, OVUM (October 2012), 2013 Trends to Watch: Retail Banking Technology. Retrieved from: http://ovum.com/research/2013-trends-to-watch-retail-banking-technology/
[32]Reuters (September 2012), UK bank outlook negative on margin cost risk – Moody's. Retrieved from http://www.reuters.com/article/2012/09/10/banks-britain-ratings-idUSL5E8KACO520120910
[33]Financial Services Authority (2011). Mortgage Market Review: Proposed package of reforms, section 8.16. Retrieved from: http://www.fsa.gov.uk/static/pubs/cp/cp11_31.pdf

nologies to meet the expectations of Generation Y consumers whose smartphones are their primary service delivery option. In 2012, the UK achieved over 51 per cent smartphone penetration, with growth projected to be 16 per cent over the next two years. However, banks are lagging in the development of robust smartphone capabilities.[34]

These costs, coupled with the fact that many LMI consumers have limited or blemished credit histories, have resulted in the decline of short-term, small-value individual loans from traditional banks. Due to the level of automation and low intervention requirements from bank personnel, credit cards and overdrafts are much more cost-effective for banks. Our foregoing analysis of credit card and overdraft loans demonstrates that, in many cases, they can be more expensive than AFS alternatives and do not always meet specific borrowing requirements of LMI consumers.

Like other industries, the financial industry tends to specialize in various market segments. Extending credit to consumers with marginal credit raises other issues that make lending to this group very expensive:

1. Default rates among LMI consumers are much higher than among upper-income consumers. Therefore, loans to LMI consumers will reflect premium pricing to cover higher default risks.
2. Banks are forced to comply with higher capital requirements to support these loans because the loans are riskier.
3. Because these loans are smaller than similar loans to wealthier customers, the expense of issuing and servicing the loans must be amortized over a smaller loan principal, which makes them relatively more expensive to the LMI consumer.

[34]Auriemma Consulting Group, Smartphone Banking Capabilities Are Lacking, (2012). Retrieved from http://www.businesswire.com/news/home/20120827005118/en/Smartphone-Banking-Capabilities-Lacking-Research-Auriemma-Consulting

4. The cost of regulation is forecast to reduce UK banks' return on equity by 48 per cent.[35] Ultimately, recovery of these costs will be reflected in loan pricing, higher fees and fewer branches.

Our loan pricing calculation and survey of available personal loan products from the major high street banks supports our conclusion that high street banks cannot profitably underwrite small value loans, especially those under £1,000.

Bank Pricing Model

We have deconstructed the basic cost elements and cited the sources for salary costs, productivity measures and rate assumptions in order to explain why high street banks cannot profitably offer small value unsecured loans. Our assumptions for a one-year unsecured loan with monthly payments are as follows:

- Funding cost = 2.89%[36]
- Loss rate = 4.6%[37]
- Overhead allocation = 1.77% of assets[38]
- Risk weighted capital ratio = 10.5%[39]
- UK corporate tax rate = 24%[40]
- A report for CDFI organizations that focus on personal loans indicates the following productivity metrics:[41]

---

[35]Chumakova, D, et al, McKinsey & Company, Day of reckoning for European retail banking, (2012). Page 1. Retrieved from http://www.mckinsey.com/client_service/~/media/mckinsey/dotcom/client_service/financial percent20services/pdfs/day_of_reckoning_for_european_retail_banking_july_2012.ashx
[36]Bank of England, Effective interest rates, (2012). Retrieved from: http://www.bankofengland.co.uk/statistics/Documents/bankstats/2012/Sep12/TabG1.4.xls
[37]Button, R, Bank of England, Understanding the price of new lending to households (2010), Page 175. Retrieved from: http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb100301.pdf
[38]Allen, F, et al, The Wharton School, The Financial System of the EU 25 (2005), Page 77. Retrieved from: http://finance.wharton.upenn.edu/~allenf/download/Vita/financial%20system%20of%20the%20eu.pdf
[39]Moody's' Analytics, Basel III New Capital and Liquidity Standards – FAQs (2012), Page 2. Retrieved from: http://www.moodysanalytics.com/~/mnd5r5sh1973 edia/Insight/Regulatory/Basel-III/Thought-Leadership/2012/2012-19-01-MA-Basel-III-FAQs.ashx
[40]HM Revenue & Customs (2012). Retrieved from: http://www.hmrc.gov.uk/budget2012/tiin-0672.pdf

  - Loan applications reviewed annually = 533
  - Loans originated annually = 320 (26/month)
- Other productivity measures[42]
  - Loans closed per centralised underwriting full-time equivalent employee ("FTE") = 93/month
  - Loan applications per processing FTE = 145/month
  - Loans serviced per FTE = 2,533
  - Average cases per consumer collections FTE = 140
- Compensation costs
  - Loan officer compensation = £25,500[43]
  - Credit underwriter = £47,900[44]
  - Loan processing specialist = £25,000[45]
  - Loan servicing specialist = £18,360[46]
  - Collection clerk = £16,000[47]

We input the loan amount and calculate the funding, loss and overhead costs plus the required pre-tax return on allocated capital and add the direct costs to determine the required interest revenue. We then calculate the required interest rate to achieve the interest revenue. The net result is the interest rate required to recover all costs plus achieve the required return on invested capital.

---

[41]Dayson, K., et al, Lloyds TSB, Lloyds TSB Operational Sustainability Research Project – Final Technical Reports (2008). Pages 18, 20). Retrieved from: http://www.european-microfinance.org/data/file/benchmark/Lloyds_TSB_Final_Technical_Report.pdf
[42]The Cornerstone Report, Benchmarks and Best Practices for Mid-Sized US Banks, (2007). Pages 4 and 5.
[43]Retrieved from: http://www.mysalary.co.uk/average-salary/Lending_Officer_7932
[44]Retrieved from: http://www.mysalary.co.uk/average-salary/Credit_Underwriter_15508
[45]Retrieved from: http://www.mysalary.co.uk/average-salary/Loan_Processing_Specialist_21098
[46]Retrieved from: http://www.mysalary.co.uk/average-salary/Loan_Servicing_Officer_21099
[47]Retrieved from: http://www.mysalary.co.uk/average-salary/Collections_Clerk_14732

Formula Elements	Variables	Revenue Components	Direct Cost & Overhead Allocation
L = Initial loan size	**£1,000.00**		
R = Interest rate	36.50%	£182.48	
E = Funding cost rate of average loan outstanding	2.89%	-£14.45	
Lr = Average loss rate (% - Original loan amount)	4.60%	-£46.00	
C =Risk weighted capital to assets ratio	10.50%		
T = Corporate tax rate	24.00%		
ROE = Pre-tax adjusted return on allocated capital of average loan outstanding	15.00%	-£9.77	
B = Average loan balance outstanding (% of initial loan)	50%		
Oc = Overhead allocation (% of average assets)	1.77%		£8.85
Co = Loan origination cost	£47.84		£47.84
Cr = Loan application cost for rejected/withdrawn	£47.84		£28.70
Rp = Loan fall out rate (applications not funded)	40%		
Cu = Underwriting cost (assumes automated process)	£0.00		£0.00
Cp = Processing cost	£14.37		£14.37
Cs = Servicing cost	£7.25		£7.25
Cc = Collection cost (based on 4.6% loss rate)	£5.25		£5.25
TOTAL		£112.26	£112.26

A loan amount of £1,000 would require an interest rate of 36.50%. A £500 loan would be priced at 57.18%.

High street banks are charging an average 11%[48] for the unsecured consumer credit products offered. RBS is one of the few high street banks that will consider a personal loan request from *existing customers* for £1,000 and quotes an APR of 23.9%.[49] Underwriting qualifiers restrict the availability of credit on any terms as well as access to the rate quoted. Many banks will consider the total customer relationship when offering credit products that may, on their own, not be profitable.

The financial crisis has renewed attention to reputational risk management and the need to "resurrect" the reputation of banks.[50] For the majority of high street banks, their strengths lie in services for middle- to upper-income customers. The Basel Committee on Banking Su-

---

[48]Button, R, Bank of England, Understanding the price of new lending to households (2010), Page 172. Retrieved from: http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb100301.pdf
[49]Rates quoted only available for customers who apply for a loan online. Rates depend on circumstances and loan amount. Retrieved from http://www.rbs.co.uk/personal/loans.ashx
[50]Laurens, F., Swiss Management Centre University, Reputational Risk: A Crisis of Confidence in Banking (2012), Page 9. Retrieved from: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2123153

pervision stresses reputational risk factors.[51] Concern over the reputational risk of charging interest rates that would adequately compensate for consumer loans of less than £1,000 inhibits high street banks from offering these products. That is, charging the higher rate for the inherent risk of these low value loans would create differential pricing between prime customers and LMI consumers. The concern is that the rate quoted to prime customers would be significantly less than to LMI consumers, giving rise to arguments of a class distinction. This distinction would disadvantage lower-income, immigrant and minority groups at a time when banks are already suffering negative media coverage on this issue. From a reputation perspective, it is beneficial for banks simply to abstain from the small-value consumer loan business rather than attempt to charge rates that would render the business profitable.

What is the argument then for banks to charge close to 13,000% APR for unauthorised overdrafts? First, banks are not required to disclose APRs on unauthorised overdrafts. Second, as demonstrated, the cost to extend very-small-value loans is significant, although one can argue the return on allocated capital would far exceed the industry benchmark of 15% in this case.

Given the high cost of low-value consumer lending and the implied reputation risk, it is no surprise that high street banks eschew these products. Banks tend to focus on profitable customer segments and product development for those segments.

In the U.S., the Federal Deposit Insurance Corporation developed a pilot small-value loan program.[52] Most banks found that the loan, in and of itself, was unprofitable. The only value that could be attributed to the program was the potential to build a relationship with the consumer in the hope that the total relationship might be profitable at some point.

---

[51] Bank for International Settlements, Enhancement to the Basel II Framework (2009), Page 19. Retrieved from: http://www.bis.org/publ/bcbs157.pdf

[52] FDIC (2010). A Template for Success: The FDIC's Small Dollar Loan Program, Page 32. Retrieved from: http://www.fdic.gov/smalldollarloans/

This inhibition to offer low-value, short-term loans is, in our opinion, one factor why high street banks are not investing in new locations to serve LMI markets. It is estimated by 2013, 75% of retail banks in North America and Western Europe will have shut down 10% or more of their traditional branches.[53] Furthermore, many banks are still behind the innovation curve in implementing technologies to gain competitive advantage.

AFS providers have emerged to fill the void to serve these markets. Indeed, they are opening more offices than traditional banks in LMI markets.[54]

The Future

Industries in Transition

Loans are a highly commoditized product and, as such, are ideally suited to the Internet.[55]

There are several industries that are in transition and evolving to new business models. The most significant trend is the delivery of products and services electronically. The music industry has progressed from vinyl records to tapes to CDs and now digital music. Digital music sales now outpace CD sales.[56] The book industry is now selling more digital books than physical books.[57]

Amazon.com built a transformational business model initially designed to sell physical books and evolved to selling eBooks and music. They do what legacy businesses have done for years but without the extensive brick-and-mortar network and employees required in stores. It is a business model that understands its customers' needs and strives for continuous improvement to stay relevant.

---

[53] Gartner, Egham., UK, (January 5, 2010). Gartner Newsroom, Retrieved from: http://www.gartner.com/it/page.jsp?id=1272313
[54] FT.com (December 6, 2011). Payday lenders' growth on deprived high streets. Retrieved from: http://www.ft.com/intl/cms/s/0/988eafda-2032-11e1-9878-00144feabdc0.html#axzz2A3l1tOlk
[55] Qfinance. Major Industry Trends, E-commerce Industry. Retrieved from: http://www.qfinance.com/sector-profiles/e-commerce
[56] The Guardian (June 2012), Is it good that music downloads now outsell CD's? Retrieved from: http://www.guardian.co.uk/commentisfree/2012/jun/03/music-downloads-outsell-cds-debate
[57] Business Insider, (September 2012), The Explosion in Kindle Book Sales. Retrieved from: http://www.businessinsider.com/chart-of-the-day-kindle-books-sold-2012-9

Their business model has reduced production and distribution costs. The cost to produce, inventory and ship a CD or a book is much more than for digital albums and eBooks. However, the price consumers pay for the digital product reflects the value of the convenience consumers perceive in the immediate acquisition and use of the product.

For example, a comparison from Amazon.com shows the price for a CD at £9.18 and the MP3 album download at £9.99.[58] The price of hardcover book £9.00 and the Kindle eBook is £11.99.[59]

Finally, a side benefit of mobile access to purchasing a good or a service, including financial services, is the "green effect" of these technologies.

Consider:

- Less construction of physical facilities
- Fewer offices means less use of electricity
- Reduction of paper through electronic delivery of information
- Less travel to offices means less burning of fuels.

Consumer Access Preferences

In a study[60] released by the Federal Reserve Board in the United States:

- 63 per cent of unbanked consumers have a mobile phone, and 91 per cent of underbanked consumers have a mobile phone.
- Underbanked consumers make comparatively heavy use of both mobile banking and mobile payments - 28 per cent have used mobile banking and 17 per cent have used mobile payments in the past 12 months, compared with 2 per cent and 12 per cent, respectively, for fully banked consumers.

[58]Retrieved from: http://www.amazon.co.uk/Babel-Mumford-Sons/dp/B008NW67E0
[59]Retrieved from : http://www.amazon.co.uk/The-Casual-Vacancy-ebook/dp/B007TK77QE/ref=sr_1_4?s=books&ie=UTF8&qid=1352570353&sr=1-4
[60]Federal Reserve, Use of Financial Services by the Unbanked and Underbanked and the Potential for Mobile Financial Services Adoption (2012). Retrieved from: http://www.federalreserve.gov/pubs/bulletin/2012/articles/MobileFinancialServices/mobile-financial-services.htm

Not only is the younger generation latching onto smartphones as their primary device for communicating, entertainment and computing, LMI consumers are also using this channel in growing numbers as a primary connection tool in the UK. [61]

Research[62] conducted in the UK in 2012 found:

- Smartphone users (85 per cent) look for local information on their phone and 81 per cent take action a result.
- Smartphones are critical shopping tools, with 95 per cent of users having researched a product or service on their device.
- Thirty-one per cent of smartphone users have made a purchase on their phone.

In 2011, UK consumers are shopping for loans at multiple sites and are making purchases based on these searches.[63] Key findings related to loan searches are:

- Average journey length of 9 days per purchase with 29 minutes average search time per purchase
- Per purchase, 4.2 sites are visited; 2.8 different site visits per purchase; 1.5 visits to each site
- 56 per cent of purchasers use search in their purchase journey, and
- 56 per cent of purchasers use both generic and brand terms in their purchase journey

This is evidence that both younger and lower-income consumers are relying more on their smartphone to research and to purchase services. Both banks and AFS providers must be cognisant of these trends and evolve their business models accordingly.

[61]The Future of Mobile and Mobile Marketing (March 2012), UK Smartphone Demographics and Stats. Retrieved from: http://txt4ever.wordpress.com/category/smartphones/
[62]Google (May 2012). Our Mobile Planet: United Kingdom. Retrieved from: http://www.thinkwithgoogle.com/insights/emea/library/studies/our-mobile-planet-United-Kingdom/
[63]Google (August 2011). Beyond last click: Understanding your consumers' online path to purchase. Retrieved from: http://www.thinkwithgoogle.com/insights/library/studies/beyond-last-click/

Conclusion

Industries are developing or re-engineering their business models to meet the needs of 21st century consumers.

LMI consumers are a growing segment for financial services. There are 10 million LMI households in the UK (43 per cent of all households) who use credit and 24 per cent of UK households use credit for everyday living expenses.

As the Bank of England statistics demonstrate, AFS providers represent the only segment in unsecured consumer lending that is growing. These non-traditional financial service firms are filling a void left by the high street banks to meet the credit needs of LMI consumers.

Indeed, AFS providers are opening more offices than traditional banks in LMI markets.

There is demand for low-value, short-term credit in the UK. High street banks have limited solutions for these consumers. These limitations are both structural and cultural. That is, banks are burdened with a technology and service delivery cost structures that date back decades. Increased compliance and regulatory costs are adding to this burden. Culturally, banks have always been focussed on the more affluent customers with products, services and staff training to meet their needs. These issues have created a business model that, at a minimum, limits solutions for LMI consumers.

We calculated that high street banks cannot profitably offer personal loans under £2,000. The smallest personal loan amount advertised by these banks averages £4,300. These products do not meet the specific low-value, short-term credit needs of many LMI consumers.

The market is responding with lenders offering products designed to meet these needs. Unsecured loan products offer amounts and payment term options designed to allow individuals to gain access to credit that best meets their needs.

Great Britain has taken a soft touch approach to regulation as compared to countries like France and Germany. This has resulted in the greater availability of a variety of credit products compared to these other countries. Appropriate regulation should ensure fair access and transparency but not constrain credit products that would ultimately harm the consumer.

Tables

Table 1 - Consumer Credit Outstanding

Consumer credit (excluding student loans)										
Amounts Outstanding £ millions	Monetary Financial Institutions	% Change from Aug 2010	Other Consumer Credit Lenders	% Change from Aug 2010	Total	% Change from Aug 2010	Credit Card	% Change from Aug 2010	Other	% Change from Aug 2010
2010 Aug	132,985		44,022		177,008		59,297		117,710	
Sep	132,041	-0.71%	44,090	0.15%	176,131	-0.50%	59,090	-0.35%	117,042	-0.57%
Oct	131,222	-1.33%	43,838	-0.42%	175,060	-1.10%	58,801	-0.84%	116,259	-1.23%
Nov	130,309	-2.01%	43,793	-0.52%	174,101	-1.64%	59,574	0.47%	114,527	-2.70%
Dec	127,357	-4.23%	46,365	5.32%	173,721	-1.86%	59,692	0.67%	114,029	-3.13%
2011 Jan	125,530	-5.61%	45,850	4.15%	171,380	-3.18%	58,822	-0.80%	112,558	-4.38%
Feb	124,473	-6.40%	45,243	2.77%	169,715	-4.12%	58,359	-1.58%	111,356	-5.40%
Mar	123,385	-7.22%	45,197	2.67%	168,582	-4.76%	57,535	-2.97%	111,047	-5.66%
Apr	122,743	-7.70%	44,977	2.17%	167,720	-5.25%	57,530	-2.98%	110,189	-6.39%
May	121,950	-8.30%	44,563	1.23%	166,513	-5.93%	57,305	-3.36%	109,208	-7.22%
Jun	121,668	-8.51%	44,387	0.83%	166,055	-6.19%	57,139	-3.64%	108,916	-7.47%
Jul	121,010	-9.00%	44,011	-0.02%	165,021	-6.77%	57,003	-3.87%	108,018	-8.23%
Aug	121,072	-8.96%	43,537	-1.10%	164,608	-7.01%	56,959	-3.94%	107,649	-8.55%
Sep	120,131	-9.67%	43,723	-0.68%	163,854	-7.43%	56,931	-3.99%	106,924	-9.16%
Oct	119,359	-10.25%	43,389	-1.44%	162,748	-8.06%	56,367	-4.94%	106,380	-9.63%
Nov	119,177	-10.38%	43,176	-1.92%	162,353	-8.28%	56,470	-4.77%	105,883	-10.05%
Dec	118,458	-10.92%	43,145	-1.99%	161,604	-8.70%	56,857	-4.11%	104,747	-11.01%
2012 Jan	115,518	-13.13%	45,732	3.88%	161,250	-8.90%	55,742	-6.00%	105,508	-10.37%
Feb	114,186	-14.14%	45,228	2.74%	159,414	-9.94%	55,032	-7.19%	104,383	-11.32%
Mar	113,994	-14.28%	45,710	3.83%	159,704	-9.78%	54,786	-7.61%	104,919	-10.87%
Apr	113,001	-15.03%	45,533	3.43%	158,535	-10.44%	54,764	-7.64%	103,771	-11.84%
May	112,589	-15.34%	45,483	3.32%	158,072	-10.70%	54,467	-8.15%	103,605	-11.98%
Jun	112,049	-15.74%	45,644	3.68%	157,693	-10.91%	54,867	-7.47%	102,826	-12.64%
Jul	111,741	-15.97%	45,564	3.50%	157,305	-11.13%	54,504	-8.08%	102,801	-12.67%

Source: Bank of England[64]

[64] Bank of England, Bankstats (Monetary & Financial Statistics) - July 2012. Retrieved from: http://www.bankofengland.co.uk/statistics/Pages/bankstats/2012/Jul12/default.aspx - Data extracted and further analysed

Table 2 - Consumer Product Matrix

Need	Product	Collateral	Average Amount	Duration	Benefit	Risk to the Borrower	Availability
Unanticipated	Unauthorised Overdraft	Unsecured	< £250	Less than 30 days	Less expensive that bouncing a cheque	Unauthorized overdraft may not be granted	All high street banks
Anticipated	Payday	Unsecured	< £1,000 Typically £300	Less than 31 days	An alternative for unauthorised overdrafts. Immediate access for emergency or other urgent needs and less expensive than an overdraft	Multiple rollovers	Available in stores and online throughout UK
Anticipated	Home Credit (Doorstep Loans)	Unsecured	<£500	30-50 weeks	Access upon approval and visit from an agent and less expensive than an overdraft. Primary purpose of the loan is for purchases and holiday expenses.	With appropriate underwriting, there are limited risks with this product	Network of local agents
Anticipated	Instalment Loan	Secured and Unsecured, Closed end	£1,000 - £25,000	12 – 120 months	Designed for larger purchases	With appropriate underwriting, there are limited risks with this product	Available on all high street banks – Must be a current account holder plus meet other requirements
Anticipated	Credit Card and Revolving Line of Credit	Unsecured, Open end	<£5000	Open-ended	May be more expensive than instalment	Extended repayment and cost if only minimum payments are made	From banks based on the credit score, lines and balances are increasing. Sub-prime products are available through Sub-Prime brands
Anticipated	Pawn	Secured	<£1000	180-210 days	Quick access	Loans amounts are a low percentage of collateral value. Potential loss of collateral	Readily available in UK
Anticipated	Log Book Loan	Secured by a vehicle	£500-£5000	18 – 48 months	Option for consumer with no access to unsecured instalment credit	Limited amount based on value of collateral. Potential loss of collateral	Available throughout UK

Source: Flores and Sharifi

Table 3 - Consumer Credit Users

Category	Data	Per cent of Population
Population	56 million	100 per cent
Credit Users	**Data**	**per cent**
Authorised Overdraft	3.3 million	5.9 per cent
Credit Card	3.1 million (.74 million benefits recipients)	5.5 per cent (1.3 per cent)
Home Credit	2.4 million (2.2 million low income)	4.3 per cent (3.9 per cent)
Payday Loan	1.3 million (.9 million low income)	2.3 per cent (1.6 per cent)
Unauthorised Over-draft	1.0 million	1.8 per cent

Source: Office of National Statistics[65] and Friends Provident Foundation[66]

[65]http://www.ons.gov.uk/ons/rel/census/2011-census/population-and-household-estimates-for-england-and-wales---unrounded-figures-for-the-data-published-16-july-2012/rft-1-2-ew-fact-file.xls

[66]Ellison, A. (2011). Credit and Low-income Consumers: A demand-side perspective on the issues for consumer protection. Pages 6 & 7. Retrieved from: http://www.friendsprovidentfoundation.org/core/core_picker/download.asp?id=200&filetitle=Credit+and+low percent2Dincome+consumers+ percent2D+A+demand per-cent2Dside+perspective+on+the+issues+for+consumer+protection percent3A++Policis+ per-cent28NB+LARGE+FILE percent29

About the Authors

Shahram Sharifi

Shahram Sharifi is a senior advisor at Chartist Research and a council member at Lafferty International.

Shahram is a highly accomplished and seasoned retail banking risk manager who began his career in mid 1980s with TSB banking group in UK. In a 25 year career covering developed and emerging markets, he has built a reputation as an innovative thinker capable of developing customer and business-focused strategies across the consumer lending product lifecycle.

Following merger of Lloyds and TSB banks in August, 1996, Shahram was promoted to Head of Credit Risk – unsecured retail banking for Lloyds. In the following 7 years in this post, he developed a world class credit risk management infrastructure for the unsecured businesses. He also served as Divisional Credit Risk Director – Oversight for the retail banking division.

Shahram has an MPhil degree in statistics and an MSc in Operation Research. In 2003 he was recognized as credit risk manager of the year by Institute of Credit Risk Management in the UK and was awarded the fellowship of the institute.

G. Michael Flores

G. Michael Flores, CEO of Bretton Woods, Inc., a U.S. based consultancy, is a subject matter expert has more than 30 years of financial institution experience through his employment in banking as well as consulting. His consulting work focuses on the areas of strategic planning, business process improvement, fee income strategies, payment systems, consumer credit and alternative financial services.

Flores has testified before U.S. House and Senate sub-committees on underbanked issues raised in white papers he authored on alternative financial services. He has spoken to industry groups and authored several articles for industry publications. He has been a faculty member with the Pacific Coast Banking School in Seattle, Washington and the Graduate School of Banking in Madison, Wisconsin where he taught Technology's Role in Community Banking curriculum for bankers in the graduate school.

Flores received a BBA in Accounting and Management from the University of Notre Dame. He is a Certified Mediator with the Centre for Dispute Resolution, Boulder, Colorado and also with the American Arbitration Association in Atlanta, Georgia.

Bibliography

Allen, F. (2005). *The Financial System of the EU 25.* The Wharton School.
Anna Ellison, C. W. (2011). *Credit and Low-income Consumers: A demand-side perspective on the issues for consumer protection.* Friends Provident Foundation.
Auriemma Consulting Group. (2012). *Smartphone Banking Capabilities are Lacking.*
Bank of England. (2012). *Bankstats (Monetary and Financial Statistics).*
Bank of England. (2012). *Effective interest rates.*
Bank of International Settlements. (2009). *Enhancement to the Basel II Framework.*
Bretton Woods, Inc. (2010). *Fee Analysis of Bank and Credit Union Non-sufficient Funds and Overdraft Protection Programs.*
Business Insider. (2012). *The Explosion in Kindle Book Sales.*
Button, R. (2010). *Understanding the price of new lending to households.* Bank of England.
Calvert, N. (2010). *Why understanding Baby Boomers, Generation X and Generation Y holds the key to smart 21st century customer service leadership.* Calcom Group.
Chumakova, D. (2012). *Day of reckoning for European retail banking.* McKinsey & Company.
Damon Gibbons, N. M. (2010). *Payday lending in the UK:a review of the debate and policy options.* Centre for Responsible Credit.
Dayson, K. e. (2008). *Lloyds TSB Operational Sustainability Research Project - Final Technical Reports.* Lloyds TSB.
Department of Business Innovation & Skills. (2010). *Implementation stage impact assessment for the Consumer Credit Directive.* BIS.
Fabiani, R. (2010). *The Business Impact of Basel III.* London: D&B Country Risk Services.
FDIC. (2010). *A Template for Success: The FDIC's Small Dollar Loan Program.*
Federal Reserve Bank. (2012). *Use of Financial Services by the Unbanked and Underbanked and the Potential for Mobile Financial Services Adoption.*
Financial Services Authority. (2011). *Mortgage Market Review:.* London: Financial Services Authority.
FT.com. (2011). *Payday lenders' growth on deprived high streets.*
Gartner. (2012). *Gartner Says 50 Per Cent of Banks will Still Lack an Innovation Programme and Budget by 2013.* Gartner.
Google. (2011). *Beyond last click: Understanding your consumers' online path to purchase.*
Google. (2012). *Our Mobile Planet: United Kingdom.*
HM Revenue and Customs. (2012). *Budget 2012.*
HM Treasury. (2010). *Statistical Release: Households without access to bank accounts 2008-2009.* HM Treasury.
Laurens, F. (2012). *Reputational Risk: A Crisis of Confidence in Banking.* Swiss Management Centre University.
Matthews, P. K. (2012, August).
Money.co.uk. (2012). *Compare Payday Loans.*
Montgomery, D. (2012). *Trends to Watch: Retail banking Technology.* OVUM.
Moody's Analytics. (2012). *Basel III New Capital and Liquidity Standards - FAQ's.*
Office of Fair Trading. (2010). *Supplementary analysis from the OFT's consumer survey and other data sources.* Office of Fair Trading.
Office of National Statistics. (2012). *2011 Census: population and household estimates for England and Wales.*
Policis. (2006). *Economic and Social Risks of Consumer Credit Market Regulation.*
Qfinance. (2012). *Major Industry Trends, E-commerce Industry.*
Reuters. (2012). *UK bank outlook negative on margin cost risk - Moody's.*

The Future of Mobile and Mobile Marketing. (2012). *UK Smartphone Demographics and Stats.*
The Guardian. (2011). *Bank branch network faces hundreds of closures.*
The Guardian. (2012). *Is it good that music downloads now outsell CD's?*