

SUPREME COURT OF THE STATE OF NEW YORK  
COUNTY OF NEW YORK

In the matter of the application of

THE BANK OF NEW YORK MELLON, (as Trustee under various Pooling and Servicing Agreements and Indenture Trustee under various Indentures), *et al.*

Petitioners,

for an order, pursuant to C.P.L.R. § 7701, seeking judicial instructions and approval of a proposed settlement.

Index No. 651786/2011  
Assigned to: Kapnick, J.

**Affidavit of  
Charles D. Cowan, Ph.D. in  
Support of Respondents'  
Motion to Compel  
Production of Loan Files**

1. I am the Managing Partner of Analytic Focus LLC. I have been engaged by counsel for Walnut Place to provide my opinion on statistical sampling of mortgage loans in connection with this proceeding.

2. I have over 40 years of experience in statistical research and design. I have applied this experience to issues related to mortgage loans for the last 20 years. In the last four years, I have designed numerous research studies related to the downturn in the housing market. My complete résumé is attached as Exhibit 1 to this affidavit.

3. I testified before Justice Bransten of this Court on September 27, 2010 in *MBIA Insurance Corp. v. Countrywide Home Loans, Inc.*, No. 60285/2008. After I testified, Justice Bransten held that my proposal for statistical sampling was appropriate and acceptable for that case.

4. The opinions expressed in this affidavit are based on my knowledge and experience in statistical research and design as applied to mortgage loans and securitization of mortgage loans.

5. I understand that this proceeding relates to the settlement of repurchase claims of 530 trusts that issued mortgage-backed securities. The trusts were created by Countrywide Home

Loans, Inc. and its affiliates. A central question in this proceeding is whether the settlement amount of \$8.5 billion is reasonable.

6. Whether the settlement amount is reasonable or not is related to Countrywide's actual liability for the claims that are to be settled. Countrywide's actual liability can be estimated by calculating how many of the loans in the 530 trusts breached the representations and warranties that Countrywide made about the loans, and the severity of losses for loans that breached the representations and warranties.

7. Based on my preliminary work to date, a random sample of between 4,630 and 6,470 loans, taken from various product types and vintages of loans, would allow me to estimate with a 99% level of confidence of between  $\pm 4.5\%$  and  $\pm 3.0\%$  respectively, the breach rate and the severity of losses for all of the loans in the 530 trusts.

8. The 530 trusts that are covered by the settlement can be grouped by type of loan and by vintage of the securitization. Table 1 below presents the counts of loans and securitizations by these two factors:

**Table 1: Distribution of Loans and Securitizations**

POPULATION

Number of Loans

Vintage	Deal Type				Total
	CWALT	CWHEL	CWHL	CWL	
2004	126,110	0	62,322	231,425	419,857
2005	268,788	0	63,348	210,078	542,214
2006	211,843	11,841	38,007	205,397	467,088
2007	95,441	18,927	35,309	85,504	235,181
2008	0	0	246	0	246
Total	702,182	30,768	199,232	732,404	1,664,586

Number of Securitizations

Vintage	Deal Type				Total
	CWALT	CWHEL	CWHL	CWL	
2004	42	0	41	27	110
2005	95	0	42	33	170
2006	80	1	29	40	150
2007	47	1	32	19	99
2008	0	0	1	0	1
Total	264	2	145	119	530

Average Number of Loans

Vintage	Deal Type				Total
	CWALT	CWHEL	CWHL	CWL	
2004	3,003	0	1,520	8,571	3,817
2005	2,829	0	1,508	6,366	3,189
2006	2,648	11,841	1,311	5,135	3,114
2007	2,031	18,927	1,103	4,500	2,376
2008	0	0	246	0	246
Total	2,660	15,384	1,374	6,155	3,141

9. I propose to select a random sample of loans for which Countrywide will provide the loan files. Those loan files will be reviewed by trained mortgage loan underwriters. The underwriters will determine whether or not Countrywide breached the representations and warranties that it made about each loan. After the loans are reunderwritten, I will extrapolate the results of the reunderwriting to make conclusions about all of the loans covered by the proposed settlement.

10. To select a sample efficiently, I propose to sample in two steps. The first stage of selection would be a sample of securitizations. I perform this sampling with publicly-available data; I do not need loan files for the first part of my task. The second stage would be a sample of loans within each sampled securitization. By sampling in this way, and distributing the sample across vintages and deal types, I can develop highly reliable estimates of the total breach rate and also of the current and future losses for all the securitizations.

11. Table 2 below gives an example of an allocation of the sample across vintage, deal types, and securitizations. The sample in table 2 would be comprised of randomly-selected securitizations and loans that fall within this criteria. Thus, of the 95 CWALT securitizations that are covered by the proposed settlement that were issued in 2005, 18 of those securitizations would be selected at random, and 26 loans from each of those securitizations would be selected at random.

**Table 2: Distribution of a Proposed Sample of Loans and Securitizations**

Number of Securitizations to be Sampled

Vintage	Deal Type				Total
	CWALT	CWHEL	CWHL	CWL	
2004	17	0	17	16	50
2005	18	0	17	17	52
2006	18	1	16	17	52
2007	17	1	16	16	50
2008	0	0	1	0	1
Total	70	2	67	66	205

Number of Loans to be Sampled per Securitization

Vintage	Deal Type				Total
	CWALT	CWHEL	CWHL	CWL	
2004	26	0	27	26	79
2005	26	0	27	26	79
2006	26	384	27	26	463
2007	26	384	27	26	464
2008	0	0	384	0	384
Total	105	768	492	104	1,469

Total Number of Loans to be Sampled

Vintage	Deal Type				Total
	CWALT	CWHEL	CWHL	CWL	
2004	442	0	459	416	1,317
2005	468	0	459	442	1,369
2006	468	384	432	442	1,726
2007	442	384	432	416	1,674
2008	0	0	384	0	384
Total	1,820	768	2,166	1,716	6,470

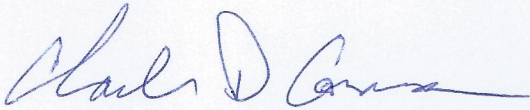
12. The sample sizes in table 2 are based on some simple assumptions about the relative reliability of estimates from different vintages and different deal types. If some deal types or vintages yield less reliable results, the anticipated confidence level of 99 percent plus or minus 3.0 percent may fall as low as 95 plus or minus 3.0 percent. This level is still satisfactory and is the confidence level accepted in numerous other similar cases involving residential mortgage backed securities (RMBS). Accordingly, the larger sample sizes are insurance against unknown or unanticipated variability in the outcomes for the forecasts.

13. Alternatively, based on the simple assumptions about the relative reliability of estimates from different vintages and different deal types, a random sample of 4,630 loans leads to an anticipated confidence level of 99 percent, plus or minus 4.5 percent. If some deal types or vintages yield less reliable results, the anticipated confidence level will fall no lower than 95 percent, plus or minus 4.5 percent.

14. I understand that Bank of America has proposed that it provide files for 150 loans that are not randomly selected. It would not be possible to derive conclusions that are statistically reliable about the breach rate or the severity of losses for all of the loans in the 530 trusts from 150 loans that are not randomly selected nor would the results of a review of 150 loan files inform my analysis or assist me in constructing a statistically meaningful sample.

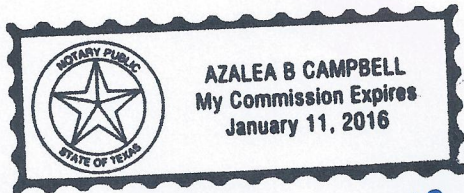
Dated: San Antonio, TX  
June 1, 2012

Respectfully submitted,



Charles D. Cowan, Ph.D.  
Analytic Focus, LLC  
4939 De Zavala Road, Suite 105  
San Antonio, Texas 78249  
210 641-2817

*Expert Witness for  
Intervenor-Respondents Walnut Place*



*Azalea B Campbell 6-1-12*



**TEXAS ORDINARY CERTIFICATE OF ACKNOWLEDGMENT**

CIVIL PRACTICE & REMEDIES CODE § 121.007

State of Texas

County of

BEXAR

Before me,

AZALEA B CAMPBELL

Name and Character of Notarizing Officer, e.g., "John Smith,  
Notary Public"

on this day personally appeared

CHARLES D. COWAN

Name of Signer

☐ known to me

☐ proved to me on the oath of

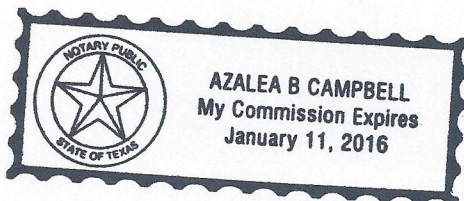
Name of Credible Witness

☒ proved to me through DRIVERS LICENSE

TX DL# 34245022 exp. 8-14-17

Description of Identity Card or Document

to be the person whose name is subscribed to  
the foregoing instrument and acknowledged to  
me that he/she executed the same for the pur-  
poses and consideration therein expressed.



Place Notary Seal and/or Stamp Above

Given under my hand and seal of office this

1 day of JUNE, A.D., 2012

Day

Month

Year

Azalea B Campbell

Signature of Notarizing Officer

**OPTIONAL**

*Though the information in this section is not required by law, it may prove valuable to persons  
relying on the document and could prevent fraudulent removal and reattachment of this form  
to another document.*

**Description of Attached Document**

Title or Type of Document:

NY AFFIDAVIT FOR CHARLES D. COWAN

Document Date:

JUNE 1st, 2012

Number of Pages:

6

Signer(s) Other Than Named Above:

NONE

**RIGHT THUMBPRINT  
OF SIGNER**

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# Exhibit 1



## **Exhibit 1: Resume - Charles D. Cowan, Ph.D.**

Charles D. Cowan is Managing Partner of ANALYTIC FOCUS LLC. Dr. Cowan has 30 years of experience in statistical research and design. He consults for numerous public and private sector entities on the design, implementation, and evaluation of research and the synthesis of statistical and sampling techniques for measurement.

Dr. Cowan has designed some of the largest and most complex research programs conducted by the Federal Government, including the Post Enumeration Program conducted by the Bureau of the Census to evaluate the 1980 Decennial Census, the Economic Cash Recovery valuations conducted by the Resolution Trust Corporation in 1990-95, and many evaluation studies conducted for the Justice Department, the Department of Defense, the Department of Housing and Urban Development, and the Treasury Department. He has provided expert advice to corporations and government agencies on the incorporation of complex research designs in demographic and economic measurement problems, including:

- Development of procedures used by the Resolution Trust Corporation and the FDIC for determination of the value of all assets held by the RTC\FDIC taken from failed banks and S&Ls. Results from this research were used in quarterly reports to Congress on the loss to the American taxpayer that resulted from these failures. These estimates of anticipated recoveries on assets were also used by the RTC and FDIC for financial reporting, leading these agencies to their first clean opinions from the GAO in their annual review of agency financial statements.
- Establishment of audit and sampling methods to determine the completeness and reliability of reporting and record systems. These procedures were used to both expand and streamline bank examinations for safety and soundness and also compliance measurement for the FDIC. These sampling techniques are applied in the audit of Federal agencies concerned with regulatory review of operations and systems, and related systems for banks, regulatory agencies, and law firms;
- Application of econometric and biometric procedures for measurement of credit risk in large portfolios of loans. These models are frequently used for a variety of purposes within financial institutions, such as the pricing of loans, the management of customers long term, decision making on workouts for delinquent loans, and for establishment of economic and regulatory reserves.
- Evaluation of research conducted for the Department of Defense, for the National Institutes of Health, and for the Department of Agriculture, each in response to Congressional inquiries on the validity of published results, and also for defendants in lawsuits involving evidence proffered by plaintiffs in furtherance of their suit.

- Model fitting and development of projection methods to measure the likelihood of loss or errors in recording in loans held by banks or put up for auction; measurement of the likelihood of fraud and/or noncompliance in systems, including bank holding companies, trading activities for brokers, and systems for compliance with health department and judicial requirements;
- Incorporation of population demographic models with financial assessment models to predict risk for insurance companies and corporations in terms of number and value of potential claims in mass tort litigation.
- Development of procedures used by the Bureau of the Census for apportionment of population for revenue sharing purposes and the estimation of the undercount in the Decennial Census of Population and Housing. These procedures include application of capture-recapture methods to measure the size of the undercount in the decennial census, use of network sampling as an alternative measure for population size, and measurement of the reliability of data collected in the Census.
- Development of statistical methods to quantify the size of populations, including nomadic populations for the Census of Somalia, the undercount and overcount in the Census of Egypt, the number of missing children in Chicago, IL, and the number of homeless persons and families needing services in several large cities with transient populations.

Dr. Cowan teaches graduate and undergraduate courses in survey methods, statistics, and computer methods for analysis. He is the co-author of two books, one on evaluation of survey and census methods and one on econometric measures related to the welfare of the U.S. economy. He has written numerous articles on statistical methods, sampling, rare and elusive population research, and optimization techniques.

Prior to cofounding ANALYTIC FOCUS<sub>LLC</sub>, Dr. Cowan was a Director with ARPC and with Price Waterhouse, where he specialized in financial research, survey research, and audit sampling. From 1991 to 1996, Dr. Cowan was the Chief Statistician for the Resolution Trust Corporation and the Federal Deposit Insurance Corporation, where he designed research necessary to measure the loss from the Savings & Loan Crisis of the late 1980's and capitalization requirements for the RTC funds from the U.S. Treasury. Dr. Cowan also served as the Chief Statistician for the U.S. Department of Education, where he designed large-scale surveys of educational institutions to measure resource needs and availability, and for Opinion Research Corporation, where he designed predictive models of demand for automobile manufacturers, banks, and large horizontally diverse firms like GE and AT&T. Dr. Cowan worked for the U.S. Bureau of the Census, where he was the Chief of the Survey Design Branch and developed many of the techniques in use today for the evaluation of coverage in surveys and censuses.

## **Education**

Ph.D., Mathematical Statistics, The George Washington University, 1984

M.A., Economics, The University of Michigan, 1973

B.A., English and B.A., Economics, The University of Michigan, 1972

## **Professional Experience**

Co-Founder, Analytic Focus LLC, January, 2002 to present.

Director, ARPC, November, 1999 to December, 2001.

Director, PricewaterhouseCoopers LLP, January 1997 to November, 1999.

Chief Statistician, Federal Deposit Insurance Corporation / RTC, 1991 to 1996.

Chief Statistician, Opinion Research Corporation, 1989 to 1991.

Chief Statistician, National Center for Education Statistics, Dept. of Education, 1986 to 1989.

Bureau of the Census: Assistant Division Chief, International Statistical Programs Center, 1984 to 1986; Staff Liaison for Statistical Litigation Support, 1983 to 1984; Chief, Survey Design Branch, Statistical Methods Division, 1978 to 1983; Acting Chief, Survey Analysis and Evaluation Branch, Demographic Surveys Division, 1976 to 1978; Office of the Chief, Statistical Research Division, 1975 to 1976

Survey Research Center, Oregon State University: Manager, 1974 to 1975

Institute for Social Research, U. of Michigan: Assistant Study Director, 1972 to 1974.

## **Professional Associations**

Adjunct Full Professor, Statistics, University of Alabama – Birmingham, 2002-present.

Associate Professor, Statistics, George Washington University, 1993 - 1998.

Visiting Research Professor, Survey Research Laboratory, U. of Illinois, 1983 - 1989.

Consultant, Dept. of Community Psychiatry, Johns Hopkins U., July 1985 - Dec 1987.

## **Professional Societies – Memberships**

American Statistical Association (ASA)

American Association for Public Opinion Research (AAPOR)

International Association of Assessment Officers

## **Professional Societies - Positions**

President, Research Industry Coalition, 1999-2000

Council Member, Research Industry Coalition, Representative from ASA, 1995-2000

President, Washington/Baltimore Chapter of AAPOR, 1998

Program Chair, American Association for Public Opinion Research, 1991-2

Program Chair, Section on Survey Research Methods, ASA, 1989-90

Secretary-Treasurer, AAPOR, 1985-1986

Associate Secretary-Treasurer, AAPOR, 1984-1985

Editorial Board, Public Opinion Quarterly, 1980-1984

Editorial Board, Marketing Research, 1989-2000

Chair, Conference Committee, AAPOR, 1982-1989

Chair, Committee on Privacy and Confidentiality, ASA, 1980-1981

## **Publications**

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