

Bank of Canada



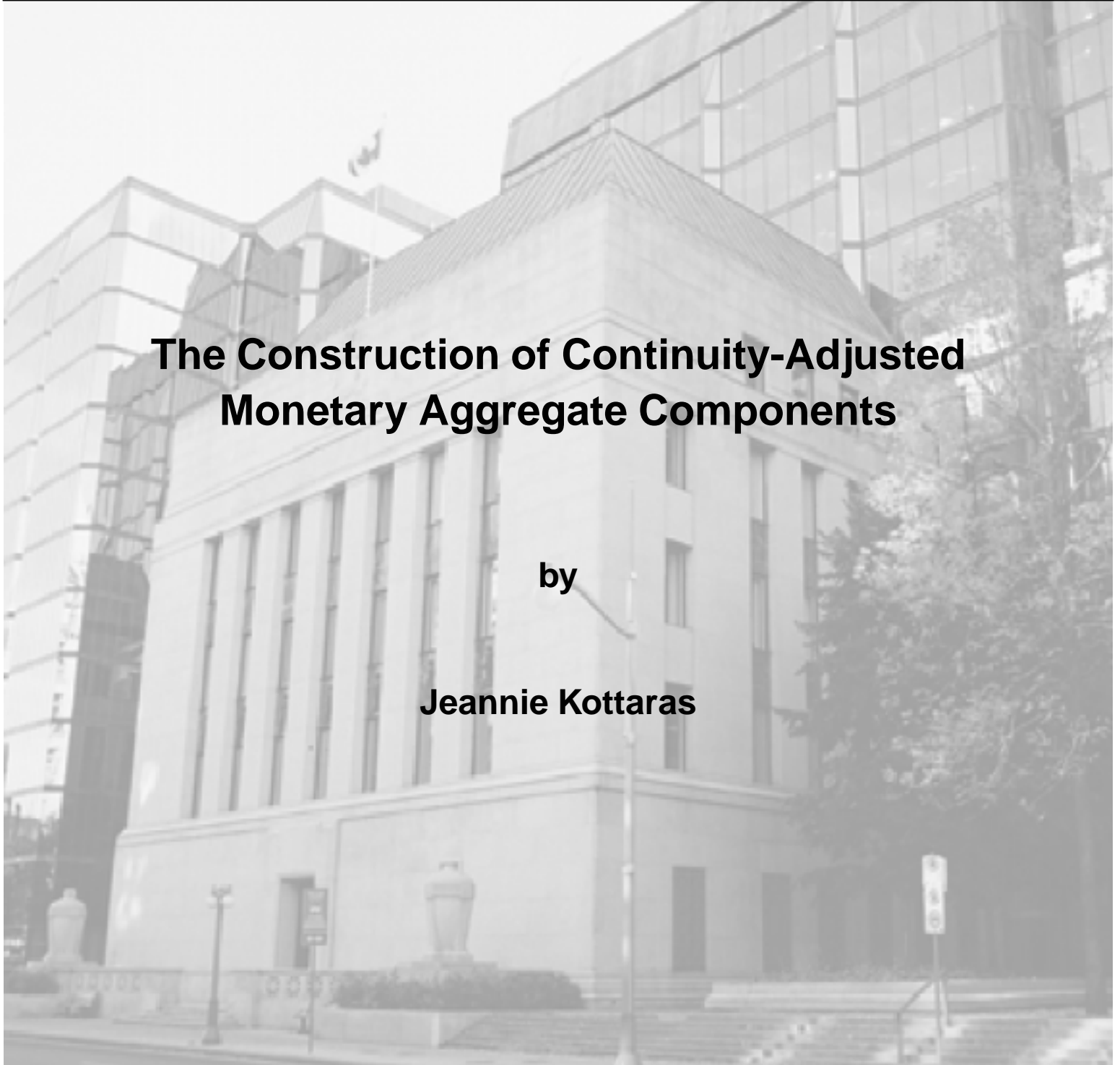
Banque du Canada

Working Paper 2003-22 / Document de travail 2003-22

# **The Construction of Continuity-Adjusted Monetary Aggregate Components**

by

**Jeannie Kottaras**



ISSN 1192-5434

Printed in Canada on recycled paper

Bank of Canada Working Paper 2003-22

August 2003

# **The Construction of Continuity-Adjusted Monetary Aggregate Components**

**by**

**Jeannie Kottaras**

Monetary and Financial Analysis Department  
Bank of Canada  
Ottawa, Ontario, Canada K1A 0G9  
[jkottaras@bankofcanada.ca](mailto:jkottaras@bankofcanada.ca)

The views expressed in this paper are those of the author.  
No responsibility for them should be attributed to the Bank of Canada.



---

## Contents

Acknowledgements.....	iv
Abstract/Résumé.....	v
1. Introduction.....	1
2. What are Continuity Adjustments and Why are They Necessary?.....	1
3. Adjusting the Monetary Aggregate Component Data.....	3
4. Adjustments, Methodology, and Results.....	3
5. Conclusion.....	5
Bibliography.....	6
Appendix A: Monetary Aggregates Published by the Bank of Canada.....	7
Appendix B: Selected Monetary Aggregates.....	8
Appendix C: Events for which Continuity Adjustments Have Been Done.....	9
Appendix D: Adjustments to Components of the Monetary Aggregates as of 12 December 2002.....	11
Appendix E: Components Before and After Adjustments.....	24

## **Acknowledgements**

I would like to thank Walter Engert, Paul Gilbert, Jamie MacKinnon, Maureen Tootle, and Carolyn Wilkins, and the seminar participants at the Bank of Canada, for their helpful comments and suggestions. Thank you to Debbie Dandy for technical assistance. Any errors or omissions are, of course, my own.

## **Abstract**

Changes in the financial industry result in new data that are inconsistent with the former presentation, and therefore adjustments are required to “adjust” or smooth out these breaks to establish continuity.

The author explains the methodology for newly calculated continuity adjustments to components of the monetary aggregates. Continuity adjustments have previously been done only for the aggregates themselves. The author lists the aggregates and their components and shows the adjustments that have been made.

*JEL classification: E51*

*Bank classification: Monetary aggregates*

## **Résumé**

Les changements que connaît le secteur financier génèrent de nouvelles données qui ne sont pas strictement comparables aux anciennes. Il convient donc de corriger celles-ci afin de réduire au minimum les problèmes de discontinuité engendrés.

L’auteure explique la méthode employée pour calculer les nouvelles corrections de continuité et les appliquer aux composantes des agrégats monétaires. Jusqu’ici, seuls les agrégats eux-mêmes faisaient l’objet de telles corrections. L’auteure énumère les agrégats et leurs composantes et passe en revue les corrections apportées.

*Classification JEL : E51*

*Classification de la Banque : Agrégats monétaires*





## 1. Introduction

The monetary aggregates published by the Bank of Canada are intermittently adjusted to smooth certain discontinuities in the data.<sup>1</sup> The discontinuities are primarily the result of institutional change. The monetary aggregates and their components are presented in the *Bank of Canada Banking and Financial Statistics* and in the *Weekly Financial Statistics* in a manner that shows all components for each aggregate as reported by all relevant financial sectors, followed by a column of “Adjustments.” In that column, all continuity adjustments are recorded and applied. The components themselves have not, to date, been adjusted.

This paper briefly describes the adjustments as they are published today and the context in which they are made, introduces and explains new adjustments at the component level, and makes the data available for other researchers. This work was undertaken in support of research on a new measure of money (Gilbert and Pichette 2003), which aims to develop a more accurate measure of transactions money and a more satisfactory means to identify and remove the effects of financial innovation. The continuity-adjusted data, however, have a broader use for researchers interested in questions related to monetary aggregates.

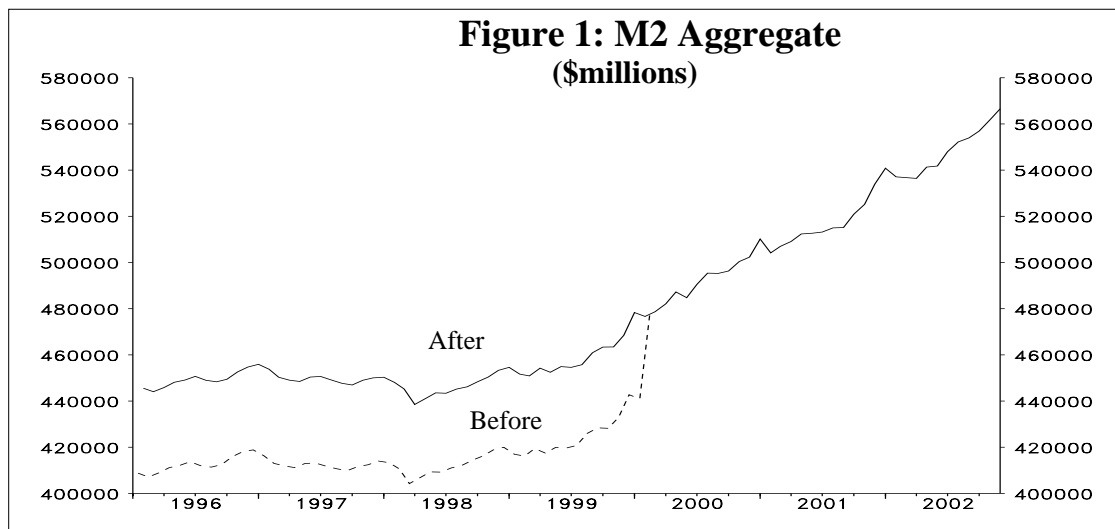
## 2. What are Continuity Adjustments and Why are They Necessary?

Continuity adjustment is the reconstruction of past data to make them consistent with how the data are currently structured. Continuity adjustments are required in the monetary aggregates whenever changes in the financial industry result in data that are inconsistent with the former presentation. Without these adjustments, the time-series data would be inconsistent and show significant breaks (discontinuities), thus making the data useless for most econometric work.

To illustrate the importance of continuity adjustments, Figure 1 shows the M2 aggregate before and after the adjustments that were necessary following the acquisition of Canada Trust by The Toronto Dominion Bank. The adjustment was necessary because M1, M2, and M3 aggregates do not include trust company deposits.

---

1. See Appendix A for a complete list of the aggregates currently published. See Appendix B for deposit types included in each aggregate.



The Bank of Canada adjusts its monetary aggregates each time one of the following four events takes place<sup>2</sup>:

- (i) the acquisition of a trust company by a bank
- (ii) the acquisition of an entity in a sector that was not previously included in the monetary aggregates (e.g., investment dealer)
- (iii) the formation of a bank from a trust company or companies
- (iv) the acquisition of a bank by a trust company

These discontinuities are documented in the annual *Notes to the Bank of Canada Banking and Financial Statistics*, Tables C1–C10 and D1. All continuity adjustments are made prior to seasonal adjustments.

Monetary aggregates are also adjusted to exclude interbank deposits. In the *Bank of Canada Banking and Financial Statistics* and the *Weekly Financial Statistics*, different classifications of deposits are presented, including deposits made from one Canadian bank to another.

Finally, for ad hoc reasons, the monetary aggregates were also adjusted in the past to (i) eliminate a number of discontinuities related to changes associated with the 1980 Bank Act revision, and (ii) introduce a new reporting system for the banks. The Bank Act revision caused discontinuities due to the requirement that the chartered banks' majority-owned subsidiaries be consolidated in the reported balance-sheet data, and due to the establishment of foreign-owned banks in Canada. The introduction of the new reporting system uncovered some inconsistencies in the way some of

2. See Appendix C for a complete list of these events.

---

the earlier data had been reported and these were corrected in the adjustments.<sup>3</sup> These adjustments are described fully in Bank of Canada (1983).

In addition, under the revised reporting system that was implemented in November 1993, data on investment dealer subsidiaries that were purchased by chartered banks in 1987 and 1988 were no longer reported separately, and thus could no longer be excluded from the monetary aggregates. To avoid a break in series over the 1987 and 1988 period, historical data were obtained and the monetary aggregates (particularly M1) were adjusted for the period 1972 to 1988 to include the free credit balances of the chartered banks' investment dealer subsidiaries.<sup>4</sup>

### **3. Adjusting the Monetary Aggregate Component Data**

In 2001, as part of an initiative related to new measures of money, the Bank of Canada decided to create a new database in which each aggregate component would be adjusted. To build such a database, it was necessary to assign all adjustments to specific deposit types. For example, *personal chequable deposits at banks* in this database include historical data for Canada Trust even for those time periods that pre-date the acquisition of Canada Trust by Toronto Dominion Bank. These continuity-adjusted components add up to the published aggregates, aside from some small corrections that have not been incorporated in the aggregates. This database is now being updated as new data are received.

The remainder of this document describes how the data (adjustments) have been obtained, adjusted, or estimated.

### **4. Adjustments, Methodology, and Results**

Adjustments were made for the events over the period 1976 to July 2002 listed in Appendix C.<sup>5</sup> There were a number of acquisitions of trust companies by banks over this period, constituting the largest aggregate adjustment in level terms. The second-largest adjustments were for entities from a sector outside the scope of the monetary aggregates that had been acquired by banks, which occurred six times. Only relatively small adjustments were required for occasions where a bank was formed from a trust company/companies. There was only one case where part of a bank's business was acquired by a trust company. Note that these data take into account adjustments for any companies that were bought or sold during the history of the acquired or newly formed company. For example, in December 1985 Canada Trust amalgamated with Canada Permanent Trust.

---

3. See Bank of Canada (1981).

4. Free credit balances are net balances with a broker or investment dealer that can be withdrawn any time by the customer and are classified as demand deposits. See Bank of Canada (1993–1994).

5. Individual component adjustments are available back to January 1968.

When the adjustments were made for the acquisition of Canada Trust by The Toronto Dominion Bank, historical data for Canada Permanent Trust were included for the period prior to December 1985.

In making the adjustments, we had to rely on a wide range of information, because the *total* of the relevant deposits for each acquisition was obtained or estimated at the time of the acquisition.<sup>6</sup> It was much more difficult, however, to obtain or estimate the more desegregated component series. For example, while the value of personal deposits for the acquired company may have been known, in some cases there were no records of the breakdown between chequable and non-chequable components and these, therefore, had to be estimated. Thus, the quality of the estimated breakdown at the component level is not as good as at the total deposit level.

The information drawn on to improve the quality of these estimates and to make the continuity adjustments includes four main sources:

- (i) trust and mortgage loan company data that the Bank of Canada had collected
- (ii) annual reports for the company that was acquired<sup>7</sup>
- (iii) data from the Office of the Superintendent of Financial Institutions' Web site
- (iv) the balance sheet of the acquired company at the time of the acquisition, which was supplied by the acquiring bank

As well, in some cases where the breakdown of the components was available only for a specific period, ratios were calculated using balance sheets for the earliest period of the breakdown and applied to the total deposits to estimate historical component data for the other periods. For example, to calculate current accounts for Company X where its total deposits were available historically (prior to 1996) and current accounts were available beginning in January 1996, the ratio was calculated in two steps:

- (i)  $\text{ratio} = \text{January 1996 current accounts of company X} / \text{total deposits of Company X}$
- (ii) to calculate current accounts prior to January 1996, multiply the total deposits for Company X for each month prior to 1996 by the ratio

The data (available or estimated) were on a month-end basis; they were then averaged to approximate monthly-average data. In this way, these data are broadly consistent with bank data used to construct the monetary aggregates, which are on a monthly-average basis.<sup>8</sup>

The adjustments to the components of the monetary aggregates are tabulated in Appendix D.

---

6. It is believed that the quality of these data is quite good.

7. Note that the data in the annual reports were annual and therefore they were interpolated to monthly for our purposes.

8. The bank data relate to the monthly average of Wednesdays only until January 1994 and the monthly average of all days thereafter.

## **5. Conclusion**

The newly created continuity adjustments smooth most discontinuities and breaks in the components of the monetary aggregates caused by the following events: the acquisition of a trust company by a bank, the acquisition of an entity in a sector that was not previously included in the monetary aggregates, the formation of a bank from a trust company or companies, and the acquisition of a bank by a trust company.

There remain some other known outstanding issues or anomalies in the data and further improvements to the data are possible. For example, there remains a break in “non-personal chequable deposits” in April 1982, which gives a corresponding break in the aggregates. Anomalies such as these that exist in the aggregates still exist in the components. This paper does not deal with these anomalies, aside from some small cases; they are left for future research on how to best define the monetary aggregates.

Our users have expressed interest in this work for a long time, and we trust that, by removing the effects of institutional changes, these data will become useful when doing econometric work.

## Bibliography

- Bank of Canada. *Bank of Canada Banking and Financial Statistics*. Ottawa: Bank of Canada. A monthly publication.
- . *Notes to the Bank of Canada Banking and Financial Statistics*. Ottawa: Bank of Canada. An annual publication.
- . *Weekly Financial Statistics*. Ottawa: Bank of Canada. A weekly publication.
- . 1981. “The new chartered bank statistical reporting system.” *Bank of Canada Review* (November): 3–15.
- . 1983. “Technical note: New and revised monetary and credit aggregates.” *Bank of Canada Review* (March): 3–6.
- . 1993–1994. “Changes in *Review* tables and revisions to the chartered bank reporting system: A technical note.” *Bank of Canada Review* (Winter): 79–82.
- Gilbert, P.D. and L. Pichette. 2003. “Dynamic Factor Analysis for Measuring Money.” Bank of Canada Working Paper No. 2003-21.

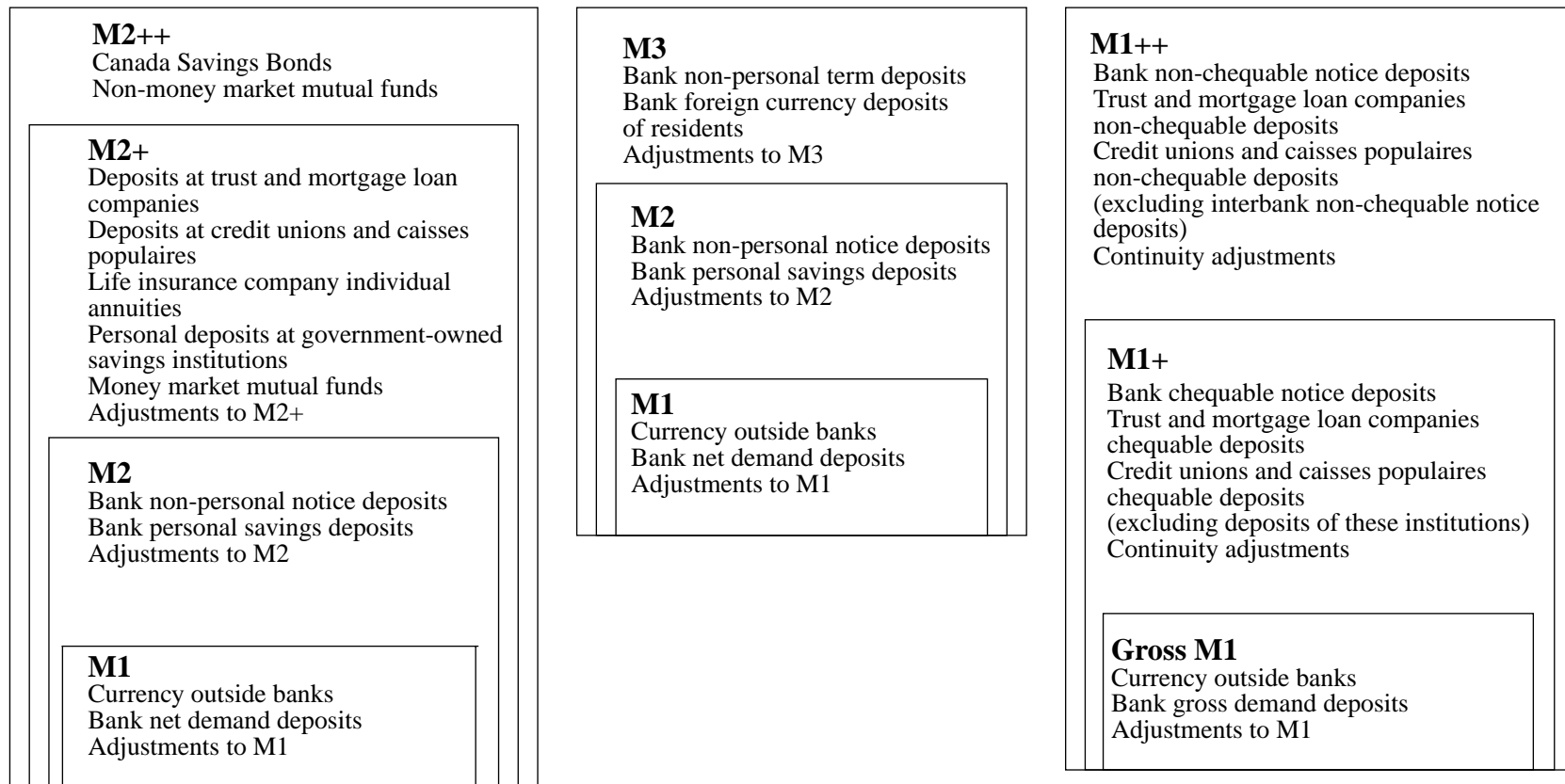
---

## Appendix A

### Monetary Aggregates Published by the Bank of Canada

<b>Gross M1</b>	(Currency outside banks plus bank gross demand deposits plus adjustments to M1)
<b>M1</b>	(Currency outside banks plus bank net demand deposits plus adjustments to M1)
<b>M2</b>	(M1 plus bank non-personal notice deposits plus bank personal savings deposits plus adjustments to M2)
<b>M3</b>	(M2 plus bank non-personal term deposits plus bank foreign currency deposits of residents plus adjustments to M3)
<b>M2+</b>	(M2 plus deposits at trust and mortgage loans companies, deposits at credit unions and caisses populaires, plus life insurance company individual annuities plus personal deposits at government-owned savings institutions plus money market mutual funds plus adjustments to M2+)
<b>M2++</b>	(M2+ plus Canada Savings Bonds plus non-money market mutual funds)
<b>M1+</b>	(Gross M1 plus chequable notice deposits held at banks plus all chequable deposits at trust and mortgage loan companies, credit unions and caisses populaires (excluding deposits of these institutions) plus continuity adjustments)
<b>M1++</b>	(M1+ plus non-chequable notice deposits held at banks plus all non-chequable deposits at trust and mortgage loans companies, credit unions and caisses populaires less interbank non-chequable notice deposits plus continuity adjustments)

## Appendix B: Selected Monetary Aggregates





---

## Appendix C

### Events for which Continuity Adjustments Have Been Done:

- 28 September 1987, Laurentian Bank (previously Montreal City and District Savings Bank) commenced operations as a chartered bank
  - Laurentian Bank sold Credit Foncier Trust and Credit Foncier Mortgage, April 1986
- 28 June 1991, Laurentian Bank of Canada acquired selected assets and liabilities of Standard Trust Company
- 1 November 1991, Laurentian Bank of Canada acquired La Financière Coopérants Inc.
- 3 March 1992, Laurentian Bank of Canada acquired Guardian Trust
- 2 July 1992, Canadian Imperial Bank of Commerce acquired Morgan Trust
- 1 January 1993, Toronto Dominion Bank purchased assets and liabilities of Central Guaranty Trust Company and Central Guaranty Mortgage Company
  - Nova Scotia Savings and Loan, Nova Scotia Savings and Trust, Central Trust, Guaranty Trust, Yorkshire Trust and Financial Trust merged in January 1989 to form Central Guaranty Trust
- 1 January 1993, Manulife Bank of Canada was formed from the merger of Regional Trust, Cabot Trust, and Huronia Trust
- February 1993, Laurentian Bank of Canada purchased General Trust Corporation
- 21 July 1993, the National Bank of Canada purchased Trust General of Canada and Sherbrooke Trust Company
- 1 September 1993, Royal Bank of Canada purchased Royal Trust Company, Royal Trust Corporation, and certain other operating subsidiaries of Gentra Inc.
- decision taken in 1993 to include Investment Dealers that were owned by banks in the monetary aggregates (Citibank Securities, Dominion Securities, First Boston Canada, Levesque Beaubien, Mcleanco, Nesbitt Thompson, Placement Societe Generale, San Wa McCarthy, Scotia Mcleod, Wood Gundy)
- 24 January 1994, the Laurentian Bank of Canada purchased the principal assets and liabilities of Prenor Trust Company
- 12 April 1994, the Bank of Nova Scotia purchased the Montreal Trust Company
- 7 September 1994, the Bank of Montreal purchased Burns Fry Ltd.
- 3 October 1994, the National Bank of Canada purchased deposits of the Confederation Trust Company
- 1 January 1995, the Canadian Western Bank purchased North West Trust Company
- 27 March 1995, the Hongkong Bank purchased deposits of the Income Trust Company
- 1 August 1995, the Hongkong Bank acquired Metropolitan Trust Company
- 1 October 1995, Laurentian Bank acquired North American Trust Company and NAL Mortgage Company
- 31 October 1995, the Canadian Imperial Bank of Commerce acquired FirstLine Trust Company
- 22 December 1995, the Bank of Montreal acquired Household Trust
- 1 June 1996, the Laurentian Bank acquired Savings and Investment Trust Company
- July 1996, the Canadian Western Bank purchased Aetna Trust Company
- 1 November 1996, the National Bank of Canada acquired Municipal Savings and Loan Corporation

- 1 November 1996, the Royal Bank of Canada purchased Richardson Greenshields
- 20 January 1997, Citizens Bank of Canada was formed from Citizens Trust Company
- 9 August 1997, ING Trust Company of Canada became a bank (ING Bank of Canada)
- 14 August 1997, the Bank of Nova Scotia purchased National Trust and Victoria and Grey Mortgage Corporation
  - National Trust purchased Victoria and Grey Trust Company, December 1984
- 26 April 1999, the Royal Bank of Canada purchased Connor Clark Private Trust Company
- 11 August 1999, Canada Trust purchased five Citibank retail branches
- 13 August 1999, the National Bank of Canada purchased First Marathon Inc.
- 1 February 2000, the Toronto-Dominion Bank purchased Canada Trust
  - Canada Trust acquired Canada Permanent Trust, December 1985
- 1 March 2000, Laurentian Bank purchased Sun Life Trust
- 2 May 2001, State Street Trust became a bank (State Street Bank and Trust Company)
- 23 June 2001, Bank of Nova Scotia purchased Fortis Trust Corporation
- 28 December 2001, the Canadian Imperial Bank of Commerce purchased the Canadian private client business of Merrill Lynch Canada Inc.
- 1 August 2002, Pacific & Western's eTrust of Canada became a bank (Pacific & Western Bank of Canada)

---

**Appendix D****Adjustments to Components of the Monetary Aggregates as of 12 December 2002**

Table D1	Bank personal chequing accounts
Table D2	Bank current accounts
Table D3	Bank net demand deposits
Table D4	Bank non-personal notice chequable deposits
Table D5	Bank non-personal notice non-chequable deposits
Table D6	Bank personal savings chequable deposits
Table D7	Bank personal savings non-chequable deposits
Table D8	Bank personal savings deposits
Table D9	Bank non-personal term deposits
Table D10	Bank foreign currency deposits of residents
Table D11	Trust and mortgage loan companies total deposits
Table D12	Credit unions and caisses populaires total deposits

**Table D1****Bank personal chequing accounts**

This adjustment represents personal chequing accounts:

- of trust companies acquired by banks
- of an entity in a sector that was not included in the monetary aggregates to a sector that is included
- of a trust company or companies that became banks

**Personal chequing accounts adjustment**

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	98	98	98	98	98	98	99	100	100	101	101	102
1977	103	103	111	112	113	113	120	126	132	139	146	153
1978	160	173	187	206	224	272	325	365	326	275	232	239
1979	254	266	270	273	281	321	367	403	375	336	304	323
1980	351	380	422	465	509	563	620	659	595	513	441	446
1981	465	476	445	405	379	431	496	544	491	422	365	389
1982	427	456	437	410	385	379	378	386	418	453	498	618
1983	752	850	793	717	656	639	628	617	633	659	683	708
1984	736	756	741	722	717	788	873	940	891	826	767	792
1985	837	886	926	962	987	945	882	843	964	1,110	1,235	1,242
1986	1,239	1,260	1,359	1,468	1,565	1,553	1,516	1,465	1,394	1,312	1,273	1,564
1987	1,926	2,249	2,285	2,225	2,123	2,022	1,922	1,821	1,714	1,589	1,341	1,347
1988	1,369	1,396	1,442	591	494	509	364	361	348	345	204	212
1989	220	226	233	238	242	246	248	248	247	253	265	277
1990	287	294	338	344	350	356	362	366	370	385	410	434
1991	454	469	484	484	470	458	446	438	430	423	417	745
1992	767	808	856	874	859	844	849	872	894	905	907	908
1993	852	849	846	899	1,009	1,120	1,192	1,228	1,263	1,294	1,320	1,347
1994	1,371	1,382	1,395	1,432	1,491	1,551	1,527	1,416	1,045	1,013	1,056	1,099
1995	1,112	1,095	1,078	1,080	1,101	1,123	1,170	1,244	1,316	1,343	1,324	1,305
1996	1,299	1,313	1,338	1,430	1,592	1,753	1,870	1,946	2,021	2,100	1,680	1,708
1997	1,690	1,698	1,695	1706	1,769	1,861	1,997	2,017	2,080	2,090	2,004	1,913
1998	1,776	1,604	1,430	1,299	1,228	1,157	1,116	1,104	1,092	1,049	975	903
1999	964	1,153	1,343	1,443	1,444	1,445	1,410	1,082	848	826	852	878
2000	915	962	984	1,000	986	971	968	974	981	1,023	1,099	1,175
2001	1,218	1,226	1,234	1,242	1,249	1,257	1,255	1,243	1,232	1,224	1,220	1,058
2002	5	35	5	5	5	5	5					

**Table D2**  
**Bank current accounts**

This adjustment represents:

(i) current accounts:

- of trust companies acquired by banks
- of an entity in a sector that was not included in the monetary aggregates to a sector that is included
- of a trust company or companies that became banks

(ii) less interbank deposits

(iii) historical revisions to M1 made necessary by the adjustments to private sector float

**Current accounts adjustment**  
Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	154	154	172	174	173	170	165	166	179	191	188	194
1977	204	207	210	204	206	216	216	215	223	225	225	237
1978	236	237	243	244	256	275	287	299	284	272	279	259
1979	264	294	292	295	297	311	328	324	320	325	323	325
1980	328	351	363	350	361	384	396	383	338	332	322	332
1981	307	312	362	353	304	293	298	239	222	261	124	91
1982	111	102	65	-6	-19	19	-1	-57	-37	-43	-19	39
1983	7	53	45	16	-9	-30	7	-37	43	26	92	-10
1984	77	80	50	60	72	91	81	53	103	110	109	90
1985	100	98	109	165	185	136	179	143	141	199	231	240
1986	203	260	263	225	226	216	261	252	212	227	-406	190
1987	277	278	320	238	187	141	368	377	368	344	236	224
1988	270	247	352	183	191	241	158	172	258	263	-110	129
1989	211	273	255	317	290	332	363	397	393	425	466	443
1990	501	471	575	561	534	574	555	611	545	591	611	621
1991	633	682	699	717	690	645	637	670	677	671	660	720
1992	692	678	712	733	733	733	729	717	680	675	648	664
1993	637	644	533	596	591	573	589	502	218	228	142	148
1994	112	185	71	-48	172	217	89	222	106	-16	-52	-53
1995	-86	-5	-327	-34	27	39	0	-6	19	-23	48	135
1996	146	-37	36	61	-18	35	10	74	94	76	-3	-1
1997	-69	44	-213	45	-57	39	-418	-317	-433	-195	-464	-376
1998	-222	-230	-253	-367	-557	-692	-600	-743	-994	-912	-571	-467
1999	-544	-610	-787	-572	-617	-500	-673	-816	-838	-764	-812	-403
2000	-17	-80	312	167	394	407	416	471	294	638	516	-183
2001	382	609	319	-23	-728	-162	-200	-159	-114	-151	-132	-214
2002	-331	-237	-176	-99	-140	-136	-144	-196	-179	-344		

**Table D3**  
**Bank net demand deposits**

This adjustment represents:

- personal chequing accounts adjustment
- current accounts adjustment
- less private sector float

**Net demand deposits adjustment**  
Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	252	251	270	271	270	268	264	266	280	292	288	295
1977	306	311	321	317	319	330	336	342	356	363	372	390
1978	396	410	430	450	480	548	611	664	610	546	511	497
1979	518	561	562	568	578	632	694	727	695	661	626	648
1980	680	732	784	816	870	947	1,017	1,043	933	844	763	778
1981	773	788	808	758	683	722	793	783	713	683	489	479
1982	538	557	502	405	367	398	377	328	381	411	479	657
1983	759	903	838	734	646	610	635	580	676	685	774	697
1984	814	837	791	782	790	879	954	993	994	936	875	883
1985	937	984	1,034	1,126	1,173	1,081	1,061	986	1,105	1,308	1,466	1,483
1986	1,442	1,520	1,621	1,693	1,791	1,768	1,778	1,717	1,606	1,538	867	1,755
1987	2,203	2,527	2,604	2,464	2,309	2,163	2,290	2,197	2,082	1,934	1,576	1,571
1988	1,639	1,644	1,794	774	685	750	522	533	605	608	94	342
1989	430	499	488	555	533	578	611	646	642	678	731	721
1990	788	766	912	906	884	931	918	977	915	976	1,021	1,055
1991	1,086	1,151	1,183	1,200	1,161	1,102	1,083	1,107	1,107	1,093	1,076	1,464
1992	1,459	1,487	1,568	1,608	1,592	1,578	1,578	1,588	1,574	1,581	1,554	1,571
1993	1,488	1,494	1,380	1,496	1,600	1,692	1,781	1,730	1,481	1,521	1,463	1,496
1994	1,483	1,566	1,467	1,384	1,663	1,769	1,616	1,639	1,152	997	1,004	1,046
1995	1,027	1,091	750	1,047	1,127	1,162	1,171	1,239	1,335	1,320	1,372	1,441
1996	1,447	1,276	1,374	1,490	1,574	1,787	1,879	2,020	2,115	2,176	1,677	1,707
1997	1,620	1,742	1,481	1,751	1,712	1,900	1,578	1,699	1,648	1,895	1,540	1,537
1998	1,553	1,373	1,177	934	672	465	516	361	98	136	404	436
1999	421	543	557	871	826	944	736	266	11	62	40	475
2000	897	882	1,296	1,167	1,381	1,377	1,383	1,445	1,276	1,662	1,613	992
2001	1,600	1,835	1,554	1,219	521	1,094	1,053	1,084	1,118	1,074	1,088	844
2002	-327	-230	-171	-93	-136	-132	-139	-195	-180	-344		

**Table D4****Bank non-personal notice chequable deposits**

This adjustment represents:

(i) non-personal chequable deposits:

- of trust companies acquired by banks

(ii) less interbank deposits

**Non-personal notice chequable deposits adjustment**

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	278	284	291	298	304	310	317	324	330	337	344	351
1977	358	363	369	375	381	387	392	397	403	410	415	421
1978	428	433	439	445	451	456	461	467	472	477	485	494
1979	501	508	514	521	528	535	542	550	556	563	577	590
1980	596	603	611	619	626	633	640	647	654	663	671	679
1981	687	694	700	706	712	718	723	728	733	737	737	739
1982	744	748	752	757	761	765	769	772	775	778	780	783
1983	790	797	805	813	821	829	836	843	851	860	864	868
1984	876	885	895	904	912	923	932	940	948	955	960	967
1985	976	984	994	963	973	982	969	983	999	1,020	1,013	1,032
1986	1,028	1,043	1,053	1,068	1,083	1,081	1,093	1,112	1,113	1,117	1,129	1,164
1987	1,172	1,175	1,215	1,219	1,216	1,243	1,161	1,208	1,226	1,228	1,236	1,229
1988	1,226	1,233	1,239	1,277	1,324	1,360	1,361	1,383	1,384	1,397	1,379	1,434
1989	1,453	1,446	1,478	1,529	1,528	1,559	1,545	1,550	1,549	1,593	1,564	1,587
1990	1,566	1,605	1,628	1,646	1,649	1,653	1,636	1,587	1,654	1,656	1,666	1,650
1991	1,657	1,590	1,670	1,632	1,531	1,560	1,651	1,776	1,791	1,773	1,805	1,799
1992	1,799	1,785	1,797	1,802	1,805	1,812	1,820	1,797	1,803	1,796	1,795	1,795
1993	1,743	1,745	1,746	1,752	1,748	1,739	1,716	1,622	1,599	1,611	1,601	1,598
1994	1,594	1,599	1,567	1,572	1,581	1,523	1,652	1,655	1,649	1,657	1,654	1,663
1995	1,680	1,624	1,684	1,657	1,594	1,726	1,736	1,740	1,738	1,750	1,763	1,755
1996	1,753	1,729	1,773	1,756	1,657	1,699	1,794	1,723	1,752	1,751	1,798	1,918
1997	1,924	1,893	1,719	2,034	1,992	2,208	2,222	1,714	1,693	1,738	1,736	1,775
1998	1,780	1,766	1,709	1,866	1,942	1,966	1,959	1,872	1,837	1,915	1,929	1,951
1999	1,887	1,882	1,734	1,754	1,990	2,009	1,979	1,832	1,760	1,799	1,808	1,840
2000	1,790	-49	-46	-47	-52	-61	-60	-45	-46	-61	-70	-66
2001	-64	-58	-63	-62	-54	-55	-47	-42	-63	-64	-71	-67
2002	-50	-51	-46	-60	-61	-49	-50	-47	-49	-40		





**Table D6****Bank personal savings chequable deposits**

This adjustment represents personal chequable deposits:

- of trust companies acquired by banks
- of an entity in a sector that was not included in the monetary aggregates to a sector that is included

**Personal savings chequable deposits adjustment**

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	4,368	4,445	4,547	4,661	4,734	4,835	4,928	5,015	5,097	5,186	5,222	5,253
1977	5,359	5,438	5,556	5,679	5,753	5,818	5,903	5,981	6,049	6,134	6,133	6,109
1978	6,204	6,281	6,358	6,470	6,529	6,577	6,651	6,719	6,785	6,844	6,892	6,812
1979	6,960	7,058	7,134	7,263	7,389	7,501	7,637	7,779	7,923	8,108	8,249	8,251
1980	8,407	8,571	8,730	8,933	8,976	9,187	9,439	9,657	9,852	10,072	10,377	10,504
1981	10,450	10,529	10,638	10,893	11,031	11,150	11,346	11,559	11,756	12,001	11,738	11,747
1982	12,012	12,195	12,229	12,367	12,738	12,852	12,890	12,888	12,920	13,075	13,208	13,091
1983	13,265	13,408	13,461	13,621	13,875	13,981	14,126	14,259	14,319	14,402	14,317	14,164
1984	14,253	14,227	14,148	14,247	14,426	14,334	14,289	14,128	14,054	14,037	13,755	13,626
1985	13,690	13,626	13,537	13,546	13,647	13,542	13,476	13,420	13,389	13,395	13,331	13,246
1986	13,286	13,138	13,006	13,182	13,362	13,493	13,662	13,789	13,894	14,083	14,335	14,356
1987	14,495	14,622	14,651	14,761	15,114	15,529	15,910	16,219	16,367	16,157	15,789	15,942
1988	16,156	16,330	16,428	16,667	17,065	17,436	17,690	17,997	18,260	18,482	18,604	18,838
1989	19,135	19,386	19,527	19,754	20,032	20,352	20,620	20,965	21,308	21,590	22,091	22,368
1990	22,706	22,921	22,944	23,246	23,356	23,278	23,260	23,266	23,214	23,326	23,487	23,475
1991	23,524	23,487	23,433	23,525	23,503	23,459	23,312	23,293	23,272	23,170	22,911	22,870
1992	22,945	22,899	22,708	22,674	22,497	22,316	22,187	22,103	21,942	21,917	21,394	21,309
1993	20,919	20,686	20,361	20,377	20,311	20,197	19,969	19,860	19,287	19,347	19,229	19,022
1994	18,956	18,881	18,619	18,543	18,397	18,272	18,108	17,933	17,809	17,667	17,109	16,985
1995	17,012	16,878	16,673	16,669	5,915	5,941	5,961	5,957	5,964	6,011	6,026	6,004
1996	6,067	6,053	5,975	6,083	6,305	6,392	6,271	6,181	6,225	6,284	6,163	6,128
1997	6,192	6,165	6,037	6,189	6,396	6,442	6,405	5,622	5,040	5,113	5,225	5,278
1998	5,312	5,187	5,065	5,286	5,437	5,359	5,433	5,420	5,278	5,265	5,280	5,278
1999	5,336	5,246	5,126	5,333	5,503	5,531	5,621	5,546	5,509	5,562	5,532	5,455
2000	5,489											



**Table D8**  
**Bank personal savings deposits**

This adjustment represents:

(i) personal savings deposits:

- of trust companies acquired by banks
- of a bank acquired by a trust company
- of an entity in a sector that was not included in the monetary aggregates to a sector that is included
- of a trust company or companies that became banks

(ii) historical adjustments to: non-personal chequable and non-chequable deposits, and (iii) estimates of personal fixed-term deposits on the books of the mortgage loan subsidiaries of the banks

**Personal savings deposits adjustment**

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	15,093	15,329	15,663	16,001	16,299	16,616	17,073	17,466	17,685	17,951	18,246	18,670
1977	18,974	19,105	19,437	19,755	20,046	20,336	20,569	20,855	21,261	21,617	21,926	22,330
1978	22,726	23,058	23,417	23,732	24,044	24,375	24,661	24,883	25,137	25,352	25,887	26,432
1979	26,744	27,086	27,443	27,772	28,092	28,544	29,103	29,566	29,924	30,281	31,155	31,951
1980	32,200	32,523	33,009	33,563	34,297	34,812	35,182	35,610	36,306	37,207	38,055	38,786
1981	39,427	40,095	40,714	41,251	41,792	42,513	43,104	43,649	44,230	44,570	37,243	37,577
1982	38,010	38,244	38,466	38,721	38,921	39,153	39,366	39,474	39,567	39,668	39,611	39,783
1983	40,233	40,574	41,036	41,594	42,046	42,545	43,035	43,450	44,051	44,610	44,792	45,035
1984	45,436	45,904	46,485	46,992	47,478	48,107	48,636	49,036	49,429	49,792	49,961	50,558
1985	51,200	51,489	51,993	52,611	53,098	53,627	53,997	54,479	55,144	55,714	56,111	56,663
1986	56,975	57,275	58,252	59,243	59,960	60,740	61,355	61,870	62,120	63,096	64,587	65,622
1987	67,467	69,448	70,580	71,181	71,662	72,724	73,349	73,460	73,394	71,896	72,182	72,527
1988	72,760	73,720	75,454	75,702	76,649	78,219	79,177	79,929	81,051	82,412	83,337	84,660
1989	85,462	86,547	88,268	89,222	90,412	91,627	91,966	92,829	93,678	94,467	95,695	96,465
1990	97,629	99,143	99,938	100,797	101,528	101,752	102,227	102,743	103,308	103,755	104,148	104,717
1991	104,723	104,871	106,154	106,899	106,837	106,649	105,359	104,981	105,139	105,217	105,199	104,176
1992	103,603	103,900	103,533	103,530	103,167	102,543	101,830	101,141	100,586	100,486	100,597	100,425
1993	88,707	87,377	87,191	87,181	86,775	86,045	83,916	81,853	67,615	67,582	67,775	67,626
1994	67,015	66,161	65,996	60,476	57,516	57,816	58,045	57,959	58,025	57,761	57,592	57,633
1995	57,264	57,477	57,782	57,673	57,592	57,706	57,815	57,254	57,284	55,089	54,704	54,161
1996	53,373	53,447	53,514	53,578	53,880	53,408	52,954	52,766	52,785	52,522	51,453	51,598
1997	51,782	51,444	51,152	51,336	51,510	51,387	51,141	43,759	38,673	38,851	39,086	37,855
1998	36,314	36,132	35,629	35,483	35,482	35,316	35,354	35,327	35,263	35,532	35,738	35,804
1999	35,966	36,057	36,115	36,304	35,403	35,287	35,326	35,560	35,730	35,947	36,234	36,374
2000	36,486	2,666	1,003	1,021	1,025	1,028	1,037	1,051	1,065	1,096	1,144	1,192
2001	1,221	1,228	1,236	1,243	1,251	1,229	1,229	1,229	1,215	1,211	1,222	1,131
2002	594	649	640	649	637	602	576					

## Table D9 Bank non-personal term deposits

This adjustment represents:

(i) non-personal term deposits:

- of trust companies acquired by banks
- of an entity in a sector that was not included in the monetary aggregates to a sector that is included
- of a trust company or companies that became banks

(ii) less interbank deposits (foreign and Canadian), (iii) non-personal term deposits on the books of the mortgage loan subsidiaries of the banks, and (iv) notes payable by those Canadian financial institutions affiliated with foreign banks prior to their incorporation as banks. This includes both Canadian-dollar and all foreign-currency notes issued by these institutions, because it was not possible to estimate how much of these foreign-currency notes payable were held by Canadian residents.

### Non-personal term deposits adjustment

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	5,123	5,103	6,228	6,724	6,819	7,169	7,755	8,025	8,042	8,161	8,033	8,323
1977	7,830	7,941	8,599	8,325	8,535	8,691	8,890	9,654	10,026	10,522	10,481	9,775
1978	9,815	9,959	10,689	11,647	11,556	12,163	12,051	13,026	13,763	13,994	13,975	14,427
1979	15,215	15,561	15,636	15,126	15,824	15,666	15,604	15,747	15,657	16,233	15,531	14,623
1980	14,725	15,419	16,240	16,927	16,889	16,909	17,684	18,018	18,605	19,844	20,331	20,228
1981	19,439	19,198	18,393	17,366	16,797	16,566	16,729	16,649	15,380	14,662	5,336	4,724
1982	3,467	-242	-383	-426	-329	-443	-533	-551	-598	-622	-718	-776
1983	-623	-679	-973	-777	-939	-881	-743	-782	-954	-1,006	-1,117	-1,220
1984	-1,158	-1,254	-1,565	-1,187	-1,694	-1,526	-1,624	-1,476	-1,332	1,593	-1,437	-1,500
1985	-1,636	-1,621	-1,557	-1,276	-1,185	-1,245	-1,287	-1,145	-1,001	2,143	-3,115	-2,456
1986	-1,922	-1,259	-1,570	-1,375	-1,072	-1,135	-935	-1,230	-1,344	1,431	-1,715	-1,638
1987	-1,470	-1,388	-1,570	-1,721	-1,495	-1,467	-1,229	-1,210	-1,290	-1,799	-1,808	-1,842
1988	-1,942	-1,807	-1,638	-1,881	-1,900	-1,848	-2,113	-2,040	-2,134	-2,254	-2,080	-2,163
1989	-2,169	-2,000	-2,232	-2,341	-2,410	-2,393	-2,442	-2,200	-2,139	-2,298	-2,430	-2,640
1990	-2,721	-2,766	-2,853	-3,077	-2,984	-2,960	-2,838	-2,846	-2,969	-2,654	-2,793	-3,064
1991	-3,115	-3,029	-3,155	-3,542	-2,883	-2,584	-2,676	-2,574	-2,568	-3,032	-3,420	-3,051
1992	-3,160	-2,801	-3,048	-2,997	-3,011	-2,890	-3,351	-3,161	-3,185	-3,533	-3,451	-3,243
1993	-3,492	-3,463	-3,255	-4,118	-3,746	-3,877	-3,573	-3,509	-2,977	-3,453	-3,043	-3,284
1994	-3,233	-3,557	-3,202	-3,551	-3,673	-3,403	-3,929	-3,867	-3,599	-3,699	-4,045	-4,011
1995	-4,049	-3,602	-3,581	-3,389	-3,047	-3,244	-3,364	-3,610	-4,043	-3,663	-2,997	-3,040
1996	-2,831	-4,519	-3,668	-3,588	-3,529	-3,284	-3,586	-3,218	-3,595	-3,411	-3,121	-3,390
1997	-2,677	-2,895	-3,647	-3,860	-3,940	-4,211	-3,482	-3,284	-4,091	-3,888	-4,090	-2,602
1998	-961	-769	-1,394	-970	-1,146	-1,405	-999	-1,586	-1,255	-186	739	427
1999	994	-1,114	1495	580	749	724	654	632	380	589	856	456
2000	356	-3,377	-3,909	-4,803	-4,251	-4,095	-4,314	-3,844	-4,091	-3,922	-4,122	-4,556
2001	-5,091	-4,934	-4,828	-5,559	-5,739	-4,970	-5,360	-4,187	-4,635	-4,961	-5,679	-5,750
2002	-5,643	-5,112	-6,115	-6,689	-6,195	-4,936	-5,078	-5,078	-4,695	-5,349		

**Table D10****Bank foreign currency deposits of residents**

This adjustment represents:

(i) foreign currency deposits of residents:

- of trust companies acquired by banks
- of a trust company or companies that became banks

(ii) less interbank deposits

**Foreign currency deposits of residents adjustment**

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1981											292	294
1982	296	297	299	301	303	304	306	308	310	312	313	315
1983	317	319	320	322	324	326	327	329	331	333	334	336
1984	338	340	342	343	345	347	349	350	352	354	356	357
1985	359	361	363	364	366	368	370	372	373	375	377	379
1986	380	382	384	386	387	389	391	393	394	396	398	400
1987	402	403	405	407	409	410	412	414	416	417	419	421
1988	423	424	426	428	430	432	433	435	437	439	440	442
1989	444	445	447	448	450	451	453	454	456	457	459	460
1990	467	479	491	502	514	526	538	550	562	573	585	597
1991	604	607	609	612	614	617	619	622	624	627	629	632
1992	632	630	627	625	623	621	618	616	614	612	609	607
1993	608	613	617	621	626	630	635	639	644	648	652	657
1994	677	712	747	782	817	852	887	922	957	992	1,027	1,062
1995	1,072	1,057	1,043	1,028	1,014	999	985	970	956	941	927	957
1996	952	979	1,014	1,037	996	951	955	971	993	997	1,006	1,041
1997	1,065	1,062	1,056	1,131	1,208	1,239	1,243	1,212	1,226	1,302	1,506	1,693
1998	1,734	1,703	1,653	1,673	1,728	1,776	1,809	1,865	1,904	1,958	1,933	1,864
1999	1,913	1,934	1,924	1,912	1,952	1,963	1,958	2,207	2,443	2,521	2,665	2,616
2000	2,656	511	473	522	545	578	718	645	596	583	600	420
2001	446	786	767	658	20							

**Table D11**  
**Trust and mortgage loan companies total deposits**

This adjustment represents:

(i) total deposits:

- of trust and loan companies acquired by banks
- of a bank acquired by a trust company

(ii) less the sum of Receiver General deposits at trust and mortgage loan companies

(iii) less trust and mortgage loan company holdings of currency and demand and notice deposits with other deposit-taking institutions

**Trust and mortgage loan companies total deposits adjustment**

Millions of dollars

Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	-13,612	-13,823	-14,127	-14,443	-14,707	-14,994	-15,412	-15,774	-15,976	-16,238	-16,515	-16,905
1977	-17,192	-17,311	-17,632	-17,938	-18,191	-18,435	-18,616	-18,831	-19,161	-19,487	-19,704	-20,011
1978	-20,345	-20,634	-20,928	-21,213	-21,482	-21,785	-22,049	-22,268	-22,492	-22,698	-23,135	-23,631
1979	-23,898	-24,153	-24,449	-24,738	-25,022	-25,434	-25,942	-26,342	-26,618	-26,912	-27,678	-28,370
1980	-28,600	-28,908	-29,334	-29,754	-30,154	-30,516	-30,803	-31,084	-31,495	-31,992	-32,431	-32,870
1981	-33,363	-33,894	-34,387	-34,795	-35,171	-35,632	-35,946	-36,155	-36,439	-36,531	-36,302	-36,415
1982	-36,747	-36,972	-37,210	-37,510	-37,760	-37,994	-38,228	-38,366	-38,427	-38,471	-38,414	-38,588
1983	-39,013	-39,340	-39,794	-40,326	-40,786	-41,284	-41,762	-42,184	-42,779	-43,337	-43,559	-43,842
1984	-44,277	-44,754	-45,327	-45,863	-46,359	-46,966	-47,511	-47,935	-48,253	-48,547	-48,747	-49,223
1985	-49,729	-50,138	-50,774	-51,404	-51,894	-52,432	-52,820	-53,297	-53,932	-54,458	-54,860	-55,443
1986	-55,724	-56,007	-56,963	-57,924	-58,633	-59,423	-60,059	-60,598	-60,871	-61,858	-63,348	-64,363
1987	-66,137	-68,033	-69,216	-69,825	-70,275	-71,364	-72,026	-72,179	-72,744	-73,652	-73,962	-74,324
1988	-74,552	-75,537	-77,330	-77,703	-78,696	-80,322	-81,311	-82,094	-83,257	-84,680	-85,712	-87,090
1989	-87,993	-89,109	-90,869	-91,849	-93,093	-94,353	-94,701	-95,602	-96,468	-97,289	-98,582	-99,379
1990	-100,584	-102,157	-102,968	-103,881	-104,681	-104,932	-105,431	-105,964	-106,538	-107,003	-107,430	-108,037
1991	-108,048	-108,188	-109,522	-110,314	-110,248	-110,061	-108,755	-108,358	-108,551	-108,654	-108,665	-108,514
1992	-108,405	-108,703	-108,346	-108,365	-108,028	-107,431	-106,725	-106,015	-105,439	-105,345	-105,474	-105,312
1993	-93,444	-92,101	-91,909	-91,895	-91,444	-90,651	-88,441	-86,308	-70,401	-70,339	-70,524	-70,361
1994	-69,541	-68,871	-68,698	-63,181	-60,226	-60,536	-60,812	-60,802	-60,951	-60,503	-60,338	-60,389
1995	-60,036	-60,268	-60,603	-60,503	-60,413	-60,527	-60,619	-60,020	-60,017	-57,825	-57,456	-57,043
1996	-56,248	-56,313	-56,492	56,537	-56,648	-56,122	-55,677	-55,485	-55,611	-55,807	-55,170	-55,396
1997	-55,356	-54,912	-54,841	-55,063	-55,095	-55,168	-54,991	-47,036	-41,733	-42,076	-42,690	-43,007
1998	-42,789	-42,741	-42,390	-42,578	-42,852	-42,904	-43,088	-43,038	-43,010	-43,219	-43,327	-43,539
1999	-43,757	-43,999	-44,282	-44,333	-43,394	-43,412	-43,564	-44,064	-44,699	-45,140	-45,485	-45,419
2000	-44,970	-3,645	-1,874	-1,893	-1,997	-2,175	-2,258	-1,984	-1,944	-2,155	-2,314	-2,195
2001	-2,163	-2,471	-2,496	-2,315	-752	-674	-676	-682	-673	-673	-687	-674
2002	-650	-710	-701	-711	-697	-659	-631					

**Table D12****Credit unions and caisses populaires total deposits**

This adjustment represents credit unions and caisses populaires:

- share capital
- holdings of currency and demand and notice deposits with other deposit-taking institutions (other than provincial centrals and federations)

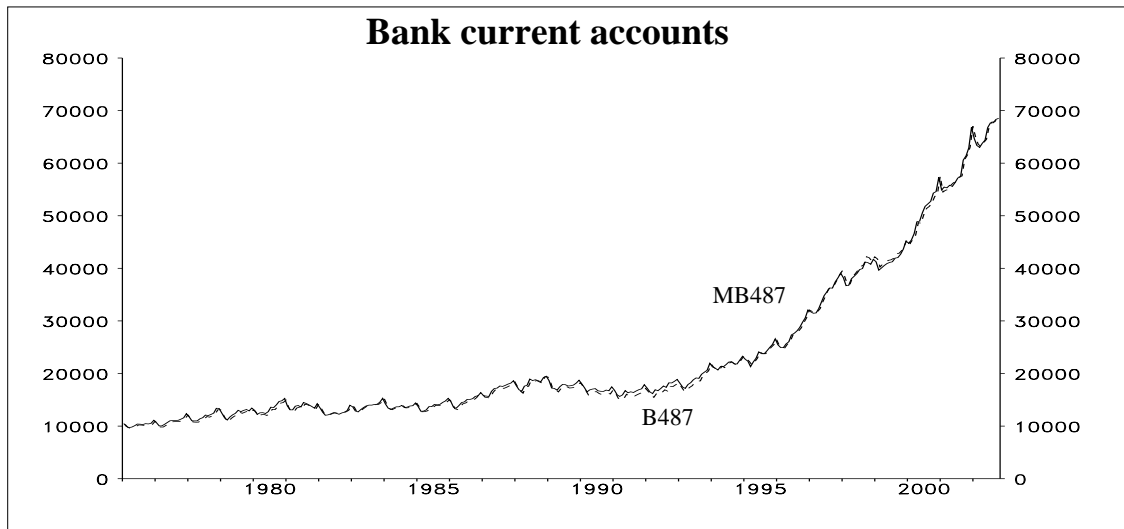
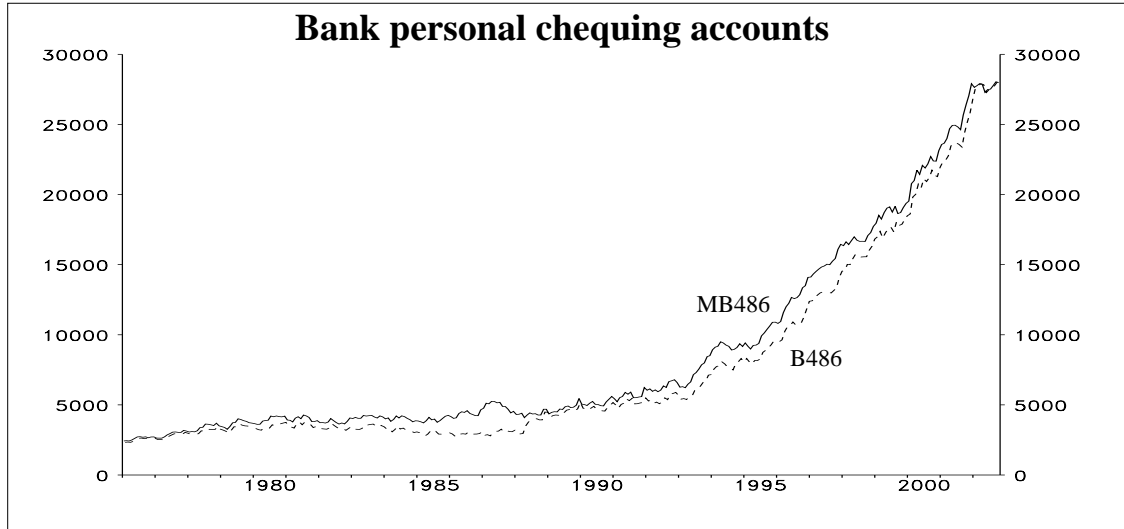
**Credit unions and caisses populaires total deposits adjustment**

Millions of dollars

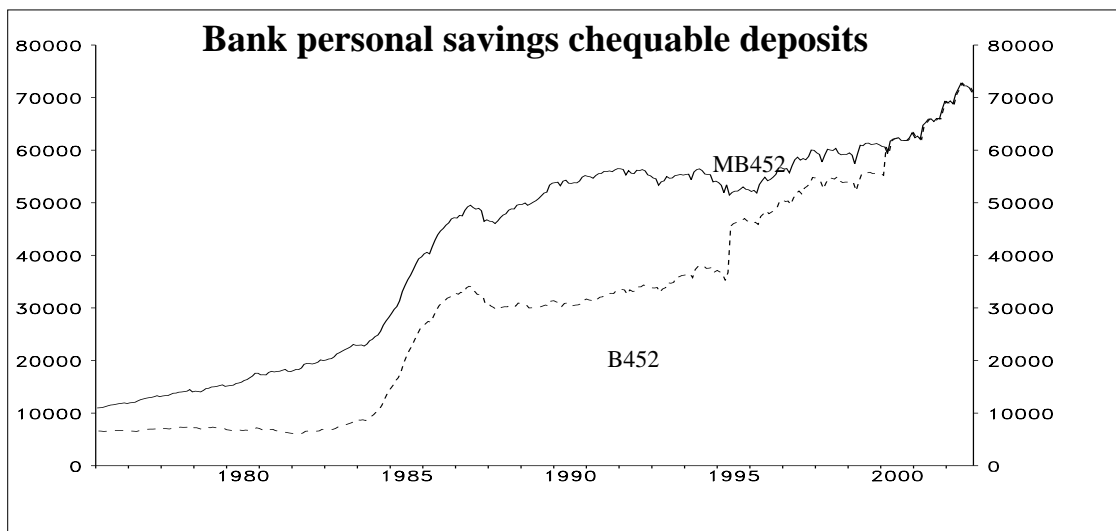
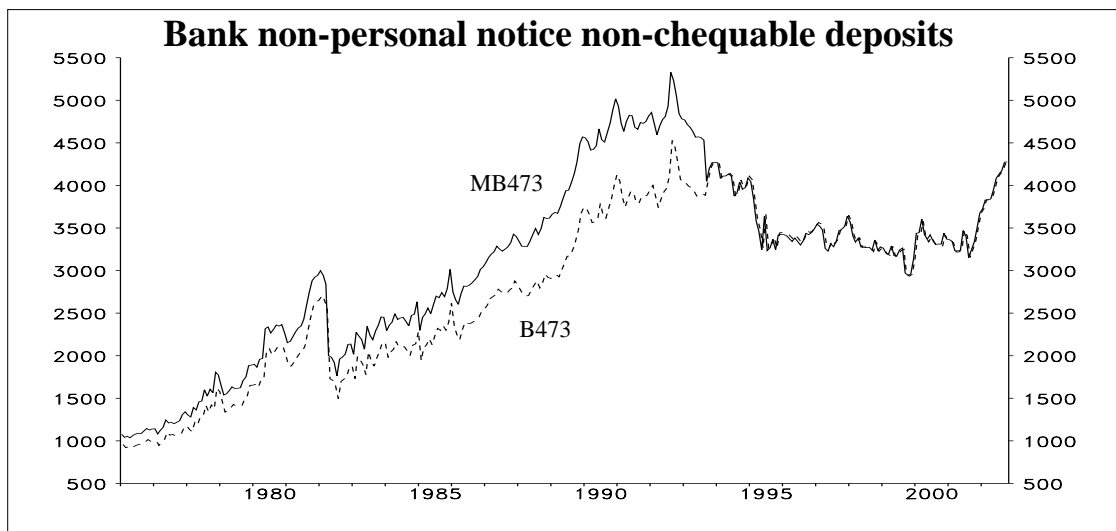
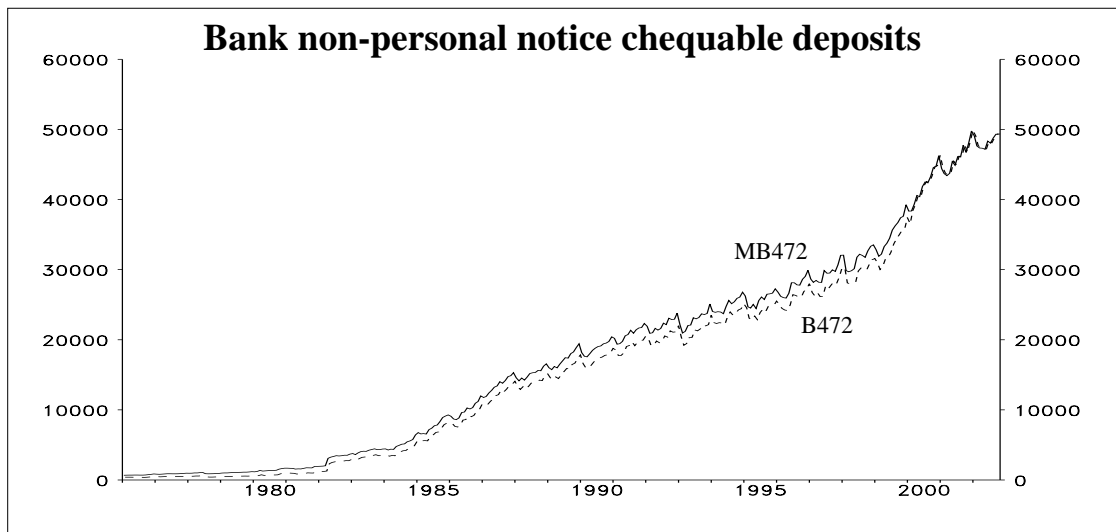
Year	January	February	March	April	May	June	July	August	September	October	November	December
1976	1,978	2,043	2,089	2,115	2,099	2,088	2,123	2,157	2,159	2,169	2,188	2,317
1977	2,306	2,361	2,415	2,451	2,468	2,485	2,516	2,561	2,606	2,639	2,660	2,681
1978	2,733	2,815	2,896	2,943	2,957	2,970	3,000	3,048	3,095	3,117	3,113	3,109
1979	3,127	3,166	3,205	3,242	3,277	3,311	3,335	3,349	3,362	3,311	3,196	3,081
1980	3,026	3,033	3,039	2,999	2,914	2,829	2,772	2,746	2,719	2,698	2,683	2,668
1981	2,661	2,661	2,661	2,624	2,550	2,475	2,411	2,358	2,305	2,247	2,184	2,121
1982	2,056	1,987	1,918	1,759	1,508	1,256	1,129	1,126	1,122	1,098	1,055	1,011
1983	1,031	1,111	1,191	1,208	1,156	1,105	1,101	1,145	1,189	1,191	1,153	1,115
1984	1,120	1,166	1,212	1,223	1,196	1,169	1,163	1,178	1,192	1,174	1,125	1,075
1985	1,084	1,148	1,212	1,225	1,180	1,136	1,132	1,168	1,203	1,206	1,178	1,150
1986	1,170	1,234	1,299	1,305	1,250	1,194	1,172	1,183	1,193	1,192	1,180	1,169
1987	1,177	1,204	1,232	1,221	1,170	1,119	1,123	1,182	1,241	1,245	1,197	1,148
1988	1,102	1,059	1,016	984	964	944	938	946	953	948	931	914
1989	901	893	884	880	879	878	871	857	844	831	820	808
1990	797	787	777	726	634	541	494	489	484	500	533	567
1991	659	800	941	1,008	993	979	1,023	1,126	1,227	1,282	1,290	1,299
1992	1,332	1,388	1,443	1,445	1,388	1,332	1,317	1,344	1,370	1,363	1,323	1,283
1993	1,282	1,319	1,355	1,362	1,335	1,309	1,312	1,343	1,373	1,370	1,336	1,301
1994	1,308	1,353	1,399	1,409	1,380	1,352	1,342	1,350	1,357	1,282	1,126	970
1995	896	908	920	891	818	746	706	698	690	679	664	649
1996	663	704	746	722	630	537	519	573	626	645	632	618
1997	669	778	888	932	905	879	890	939	988	967	878	789
1998	778	842	907	924	891	858	846	857	867	862	841	821
1999	857	947	1,036	1,065	1,029	993	970	959	949	936	919	902
2000	903	923	943	931	886	842	827	842	857	861	855	849
2001	854	868	883	859	794	730	722	769	815	753	586	419
2002	372	445	518	605	704	803	869	903	937	883		

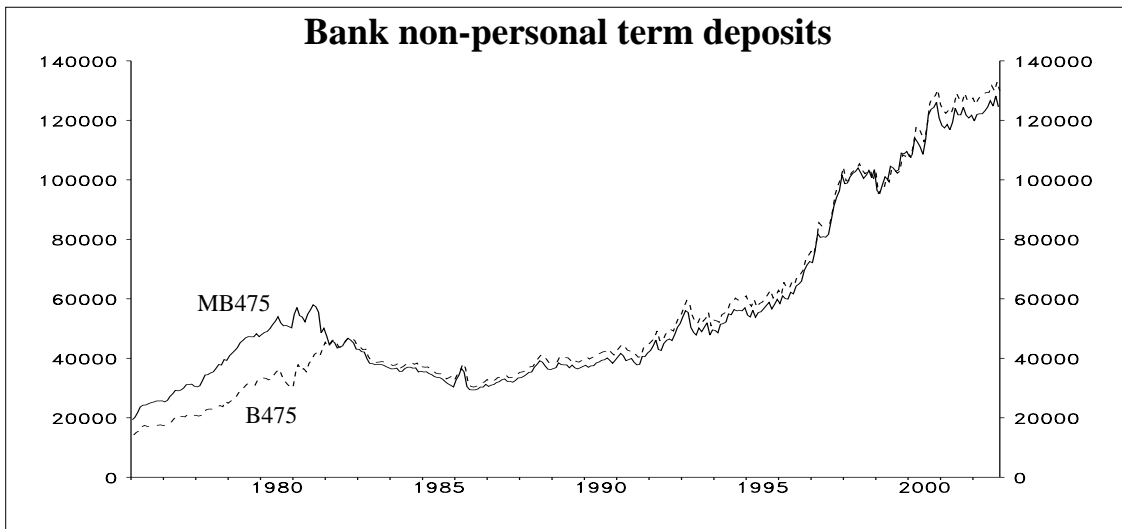
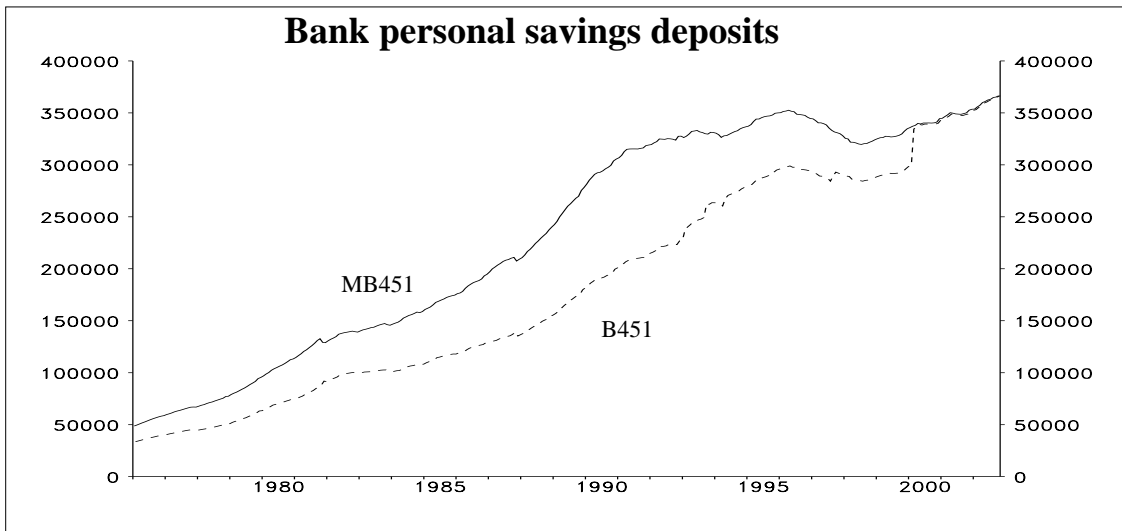
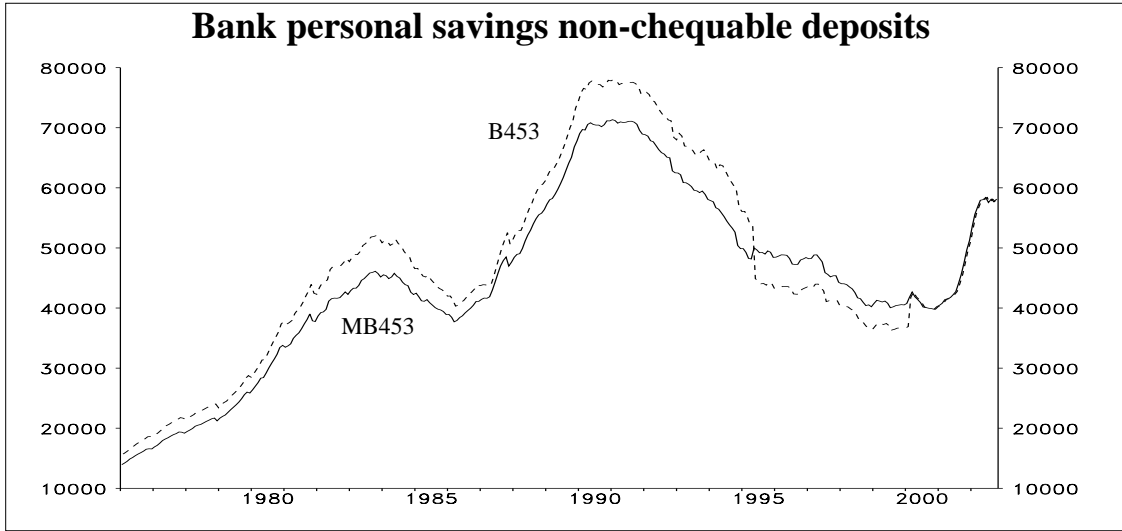
**Appendix E: Components Before and After Adjustments**

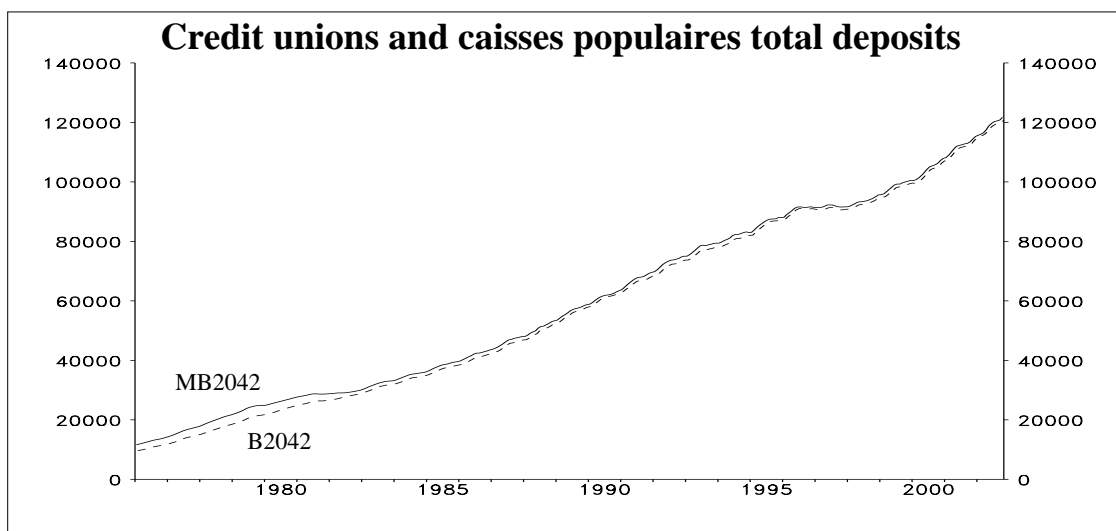
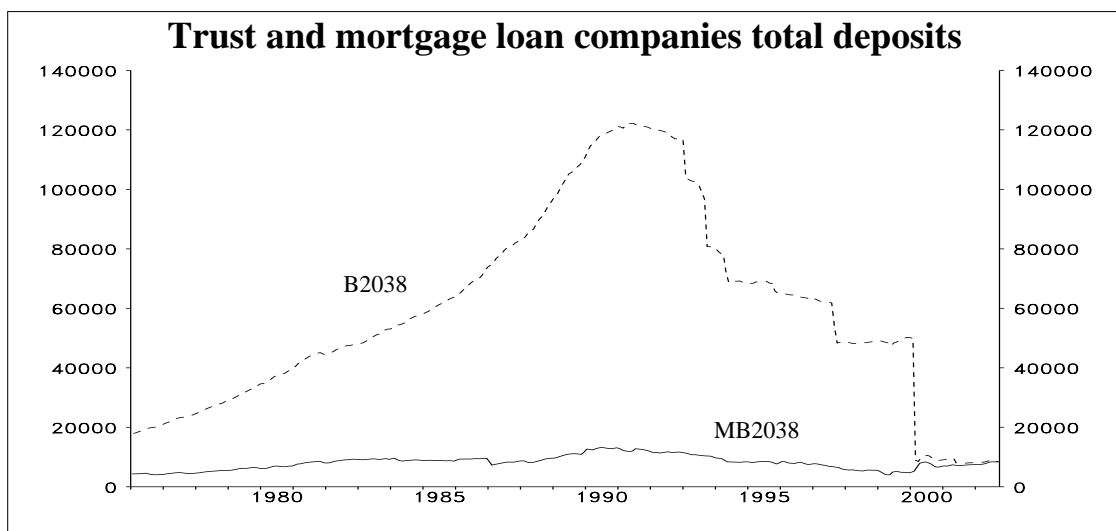
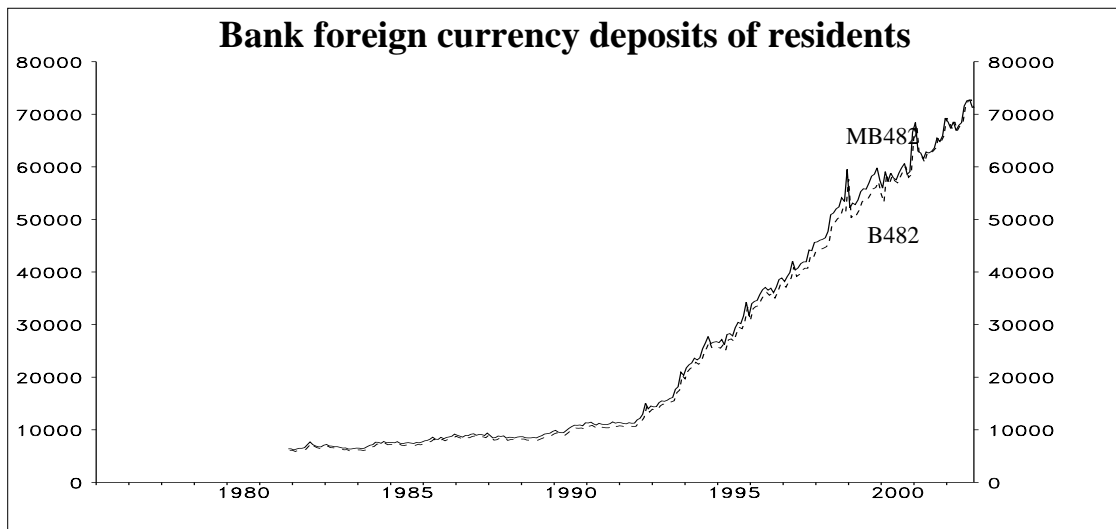
(Series labelled starting with a B is data prior to adjustments and series labelled starting with MB is data after adjustments)











# Bank of Canada Working Papers

## *Documents de travail de la Banque du Canada*

Working papers are generally published in the language of the author, with an abstract in both official languages. *Les documents de travail sont publiés généralement dans la langue utilisée par les auteurs; ils sont cependant précédés d'un résumé bilingue.*

### 2003

2003-21	Dynamic Factor Analysis for Measuring Money	P.D. Gilbert and L. Pichette
2003-20	The U.S. Stock Market and Fundamentals: A Historical Decomposition	D. Dupuis and D. Tessier
2003-19	A Small Dynamic Hybrid Model for the Euro Area	R. Djoudad and C. Gauthier
2003-18	Technological Change and the Education Premium in Canada: Sectoral Evidence	J. Farès and T. Yuen
2003-17	Explaining and Forecasting Inflation in Emerging Markets: The Case of Mexico	J. Bailliu, D. Garcés, M. Kruger, and M. Messmacher
2003-16	Some Notes on Monetary Policy Rules with Uncertainty	G. Srouf
2003-15	The Syndicated Loan Market: Developments in the North American Context	J. Armstrong
2003-14	An Index of Financial Stress for Canada	M. Illing and Y. Liu
2003-13	Un modèle << PAC >> d'analyse et de prévision des dépenses des ménages américains	M.-A. Gosselin and R. Lalonde
2003-12	The Macroeconomic Effects of Military Buildups in a New Neoclassical Synthesis Framework	A. Paquet, L. Phaneuf, and N. Rebei
2003-11	Collateral and Credit Supply	J. Atta-Mensah
2003-10	A Stochastic Simulation Framework for the Government of Canada's Debt Strategy	D.J. Bolder
2003-9	Bank Lending, Credit Shocks, and the Transmission of Canadian Monetary Policy	J. Atta-Mensah and A. Dib
2003-8	Comparing Alternative Output-Gap Estimators: A Monte Carlo Approach	A. Rennison
2003-7	Testing the Stability of the Canadian Phillips Curve Using Exact Methods	L. Khalaf and M. Kichian
2003-6	Valuation of Canadian- vs. U.S.-Listed Equity: Is There a Discount?	M.R. King and D. Segal

Copies and a complete list of working papers are available from:

*Pour obtenir des exemplaires et une liste complète des documents de travail, prière de s'adresser à :*

Publications Distribution, Bank of Canada  
234 Wellington Street, Ottawa, Ontario K1A 0G9  
E-mail: [publications@bankofcanada.ca](mailto:publications@bankofcanada.ca)  
Web site: <http://www.bankofcanada.ca>

Diffusion des publications, Banque du Canada  
234, rue Wellington, Ottawa (Ontario) K1A 0G9  
Adresse électronique : [publications@banqueducanada.ca](mailto:publications@banqueducanada.ca)  
Site Web : <http://www.banqueducanada.ca>