

61 001

Historical File Copy

C A N A D A

DEPARTMENT OF TRADE AND COMMERCE

DOMINION BUREAU OF STATISTICS

GENERAL STATISTICS BRANCH

Vol. 4

No. 8

BANK DEBITS TO INDIVIDUAL ACCOUNTS

or

Amount of Cheques Passing Through the Banks

at

Clearing House Centres in Canada

AUGUST 1927

♦ ♦ ♦

Published by authority of the Hon. James Malcolm, M. P.,

Minister of Trade and Commerce

♦ ♦ ♦

OTTAWA

1927

Historical Life Copy

THE LIFE OF JOHN ADAMS

BY

JOHN ADAMS

1791

DOMINION BUREAU OF STATISTICS  
GENERAL STATISTICS BRANCH  
OTTAWA

Dominion Statistician; R.H.Coats; B.A., F.S.S., (Hon.), F.R.S.C.  
Chief General Statistician; S.A.Cudmore, M.A., F.S.S.

BANK DEBITS TO INDIVIDUAL ACCOUNTS

or

7 Amount of Cheques charged against Bank Accounts at the Clearing  
House Centres. August 1927.

The dollar volume of business in Canada showed a moderate increase in August, the increase in bank debits over August 1926 being 6.5 p.c. while the increase over July last was about 4 p.c. when allowance is made for seasonal variation. The total in August, as reported to the Dominion Bureau of Statistics by the Canadian Bankers' Association was \$2,607,000,000, as compared with \$2,446,000,000 in August 1926 and \$2,687,000,000 in July last. Bank clearings in August were \$1,542,000,000 compared with \$1,404,000,000 in the same month of 1926, an increase of about 10 p.c.

Debits in First Eight Months

The total debits during the first eight months of 1927 were \$21,313,000,000 compared with \$19,411,000,000 in the same period of 1926, an increase of \$1,902,000,000 or nearly 10 p.c. The advance was chiefly in Quebec and Ontario, where gains of 17 p.c. and 12 p.c. respectively were shown, while an increase of 2 p.c. was attained in British Columbia. The decline in the Maritime provinces was 3 p.c. and a decrease of 2 p.c. was shown in the Prairie provinces.

Comparison with July after Seasonal Adjustment

Debits in Canada during August are normally not quite 7 p.c. less than in July, according to the calculation based on bank clearings over a period of twelve years. The actual decline in August was 3 p.c., while after seasonal adjustment an increase of 4 p.c. was indicated. Indexes of seasonal variation are also computed for the four large centres, each of which, with the exception of Montreal, showed increases in August after seasonal adjustment. The increase in Toronto was 13 p.c.; Winnipeg showed a gain of 20 p.c., while a gain of 11 p.c. was attained in Vancouver. The decline in Montreal was less than 2 p.c.

Comparison by Areas with August, 1926.

Maritime Provinces.- Increases were shown in Halifax and Moncton, the net result in the three provinces being an increase of 2.4 p.c.

Quebec.- Declines were shown in Montreal and Sherbrooke, in contrast with an increase of 23 p.c. in Quebec City. The aggregate for the three centres of the province showed a decline of 1.5 p.c.

Ontario.- Nine centres in Ontario showed increases, the gains at Hamilton, Ottawa and Toronto being 5 p.c., 5.5 p.c., and 9 p.c., respectively. The total debits in the province were \$1,035,000,000 involving an increase of 15 p.c.

Prairie Provinces.- Although Winnipeg showed a slight decline, the debits in the three provinces increased 5.6 p.c. in this comparison. The increase in Calgary was 11 p.c., while Edmonton and Regina showed gains of 19 p.c. and 35 p.c. respectively.



THE UNIVERSITY OF CHICAGO  
DIVISION OF THE PHYSICAL SCIENCES  
DEPARTMENT OF PHYSICS

PHYSICS 311  
LECTURE 10

The first part of the lecture is devoted to a review of the basic concepts of quantum mechanics. We begin with the wave function, which is a mathematical description of the state of a system. The wave function is a complex-valued function of position and time. The probability of finding a particle at a certain position is given by the square of the magnitude of the wave function. The wave function satisfies the Schrödinger equation, which is a partial differential equation. The energy levels of a system are determined by the eigenvalues of the Hamiltonian operator. The wave function can be expanded in terms of the eigenfunctions of the Hamiltonian. The probability of finding a particle in a certain energy state is given by the square of the magnitude of the coefficient of the corresponding eigenfunction in the expansion.

The second part of the lecture is devoted to the study of the harmonic oscillator. The harmonic oscillator is a system that can be modeled by a mass-spring system. The potential energy of the harmonic oscillator is given by  $\frac{1}{2}kx^2$ , where  $k$  is the spring constant and  $x$  is the displacement from equilibrium. The wave function of the harmonic oscillator can be found by solving the Schrödinger equation. The energy levels of the harmonic oscillator are given by  $E_n = \hbar\omega(n + \frac{1}{2})$ , where  $\hbar$  is the reduced Planck constant,  $\omega$  is the angular frequency, and  $n$  is a non-negative integer. The wave function of the harmonic oscillator is given by  $\psi_n(x) = \frac{1}{\sqrt{2^n n!}} \left(\frac{m\omega}{\pi\hbar}\right)^{1/4} e^{-\frac{m\omega x^2}{2\hbar}} H_n\left(\sqrt{\frac{m\omega}{\hbar}} x\right)$ , where  $H_n$  is the Hermite polynomial of order  $n$ .

The third part of the lecture is devoted to the study of the hydrogen atom. The hydrogen atom is a system consisting of a proton and an electron. The potential energy of the hydrogen atom is given by  $V(r) = -\frac{e^2}{4\pi\epsilon_0 r}$ , where  $e$  is the elementary charge,  $\epsilon_0$  is the permittivity of free space, and  $r$  is the distance from the proton to the electron. The wave function of the hydrogen atom can be found by solving the Schrödinger equation. The energy levels of the hydrogen atom are given by  $E_n = -\frac{13.6 \text{ eV}}{n^2}$ , where  $n$  is a positive integer. The wave function of the hydrogen atom is given by  $\psi_{nlm}(r, \theta, \phi) = R_{nl}(r) Y_{lm}(\theta, \phi)$ , where  $R_{nl}(r)$  is the radial wave function and  $Y_{lm}(\theta, \phi)$  is the spherical harmonic of order  $l$  and  $m$ .

The fourth part of the lecture is devoted to the study of the scattering of particles. Scattering is a process in which a particle is deflected by a potential. The scattering cross-section is a measure of the probability of scattering. The scattering cross-section can be calculated using the Born approximation. The Born approximation is a method for calculating the scattering cross-section by treating the potential as a perturbation. The scattering cross-section is given by  $\sigma = \frac{4\pi}{k^2} \sin^2\left(\frac{\theta}{2}\right) |f(\theta)|^2$ , where  $k$  is the wave vector,  $\theta$  is the scattering angle, and  $f(\theta)$  is the scattering amplitude. The scattering amplitude is given by  $f(\theta) = -\frac{m}{2\pi\hbar^2} \int d^3r e^{i\mathbf{q} \cdot \mathbf{r}} V(\mathbf{r}) \psi(\mathbf{r})$ , where  $\mathbf{q}$  is the momentum transfer and  $\psi(\mathbf{r})$  is the wave function of the incident particle.

British Columbia.— Each of the centres in British Columbia showed increases, the gain in Vancouver being 7 p.c., while the total debits in the province were \$169,500,000, an increase of 6.6 p.c.

Comparison with Other Factors

The moderate increase (after seasonal adjustment) in bank debits was doubtless due to speculative activity, the index of the physical volume of business being 138.0 in August compared with 138.6 in July. The index of industrial employment was 109.7 on September 1, the highest point in recent years, though after seasonal adjustment higher indexes would be indicated for April, June and July.

The trading on the Montreal Stock Exchange amounted to 627,009 shares compared with 419,177 in July, and trading in mining stocks and in grain was also active in August.

Indexes of Canadian Business Conditions Based on the Six Year Period from 1919-1924 and Corrected where necessary for Seasonal Variation

Month	Bank Debits	Physical Volume of Business	Industrial Employment First of Month	Shares Traded on Montreal Exchange
<u>1926</u>				
January	105.7	127.8	99.3	204.1
February	129.6	135.7	98.4	323.0
March	112.6	129.9	98.2	229.3
April	121.9	134.3	99.9	127.7
May	103.9	135.0	99.9	132.5
June	121.2	138.4	102.1	113.0
July	111.5	134.1	103.5	106.8
August	119.0	134.4	102.5	385.1
September	113.1	132.9	103.4	310.9
October	105.0	142.9	102.9	290.5
November	106.0	138.6	101.0	191.1
December	110.0	132.0	102.0	256.4
<u>1927</u>				
January	124.4	136.8	105.0	201.8
February	127.6	140.0	103.4	209.8
March	129.8	149.3	103.5	245.9
April	125.5	147.8	108.9	276.4
May	129.0	151.2	105.6	343.0
June	131.0	150.8	108.1	373.0
July	123.3	138.6	108.0	166.6
August	128.5	138.0	107.5	247.7
September	-----	-----	107.9	-----

September 23, 1927—MKP



STATE OF NEW YORK

IN SENATE

JANUARY 1, 1901

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

FOR THE YEAR 1900

ALBANY: JAMES B. LEECH, 1901.

PRINTED BY THE STATE PRINTING OFFICE.

RECEIVED JANUARY 1, 1901.

STATE OF NEW YORK.

IN SENATE.

JANUARY 1, 1901.

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

FOR THE YEAR 1900

ALBANY: JAMES B. LEECH, 1901.

PRINTED BY THE STATE PRINTING OFFICE.

RECEIVED JANUARY 1, 1901.

STATE OF NEW YORK.

IN SENATE.

JANUARY 1, 1901.

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

FOR THE YEAR 1900

ALBANY: JAMES B. LEECH, 1901.

PRINTED BY THE STATE PRINTING OFFICE.

RECEIVED JANUARY 1, 1901.

STATE OF NEW YORK.

IN SENATE.

JANUARY 1, 1901.

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

FOR THE YEAR 1900

ALBANY: JAMES B. LEECH, 1901.

PRINTED BY THE STATE PRINTING OFFICE.

RECEIVED JANUARY 1, 1901.

STATE OF NEW YORK.

IN SENATE.

JANUARY 1, 1901.

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

FOR THE YEAR 1900

ALBANY: JAMES B. LEECH, 1901.

PRINTED BY THE STATE PRINTING OFFICE.

RECEIVED JANUARY 1, 1901.

STATE OF NEW YORK.

IN SENATE.

JANUARY 1, 1901.

REPORT OF THE

COMMISSIONER OF THE LAND OFFICE

FOR THE YEAR 1900

ALBANY: JAMES B. LEECH, 1901.

PRINTED BY THE STATE PRINTING OFFICE.

RECEIVED JANUARY 1, 1901.

STATE OF NEW YORK.

IN SENATE.

JANUARY 1, 1901.

1. BANK DEBITS TO INDIVIDUAL ACCOUNTS AT THE CLEARING HOUSE CENTRES OF  
CANADA, AUGUST 1927, WITH COMPARATIVE FIGURES FOR  
JULY 1927, AND AUGUST, 1926.

	Debits to Individual Accounts		
	August, 1927	July, 1927	August, 1926
	\$	\$	\$
<u>Maritime Provinces -</u>			
Halifax	25,470,260	30,135,561	24,326,351
Moncton	7,197,520	7,734,659	6,333,039
Saint John	19,020,007	13,203,415	19,349,176
Total-Maritime Provinces.....	51,687,787	56,123,635	50,508,566
<u>Quebec -</u>			
Montreal	786,457,037	373,829,366	310,744,553
Quebec	62,630,101	70,126,219	50,953,235
Sherbrooke	9,552,364	9,725,831	10,433,564
Total-Quebec.....	858,640,002	953,681,466	372,141,402
<u>Ontario -</u>			
Brantford	11,449,991	9,314,722	9,919,533
Chatham	7,664,943	3,166,147	6,639,393
Fort William	3,500,945	9,045,060	10,419,936
Hamilton	54,737,339	57,315,506	52,201,799
Kingston	6,263,132	6,771,517	4,331,340
Kitchener	9,546,030	9,662,933	3,014,232
London	25,933,074	30,421,233	26,617,726
Ottawa	123,720,922	126,270,603	117,377,043
Peterborough	6,025,230	6,992,613	5,733,312
Sarnia	10,124,334	3,996,694	10,329,655
Toronto	737,430,103	714,130,337	619,141,573
Windsor	33,702,534	33,500,329	27,321,552
Total-Ontario.....	1,035,153,797	1,026,033,349	398,593,704
<u>Prairie Provinces -</u>			
Brandon	4,469,392	4,226,034	4,331,192
Calgary	54,716,177	59,605,400	49,150,031
Edmonton	34,976,532	39,235,561	29,404,193
Lethbridge	5,139,002	4,412,396	5,359,635
Medicine Hat	2,953,393	3,111,719	2,292,905
Moose Jaw	9,094,342	3,355,334	3,023,761
Prince Albert	2,591,467	2,491,632	2,234,037
Regina	47,519,111	39,436,307	35,210,353
Saskatoon	15,672,103	13,007,179	13,073,434
Winnipeg	311,560,411	302,314,572	313,311,371
Branches of the Weyburn Security Bank	3,632,736	3,637,257	3,207,063
Total-Prairie Provinces.....	492,374,721	430,934,541	466,103,535
<u>British Columbia -</u>			
New Westminster	7,157,362	6,942,971	6,232,263
Vancouver	132,319,304	123,099,234	124,036,659
Victoria	29,437,513	35,553,193	23,523,313
Total-British Columbia.....	169,465,179	165,595,453	153,392,735
Grand Total for Canada.....	2,607,321,436	2,637,423,944	2,445,244,992

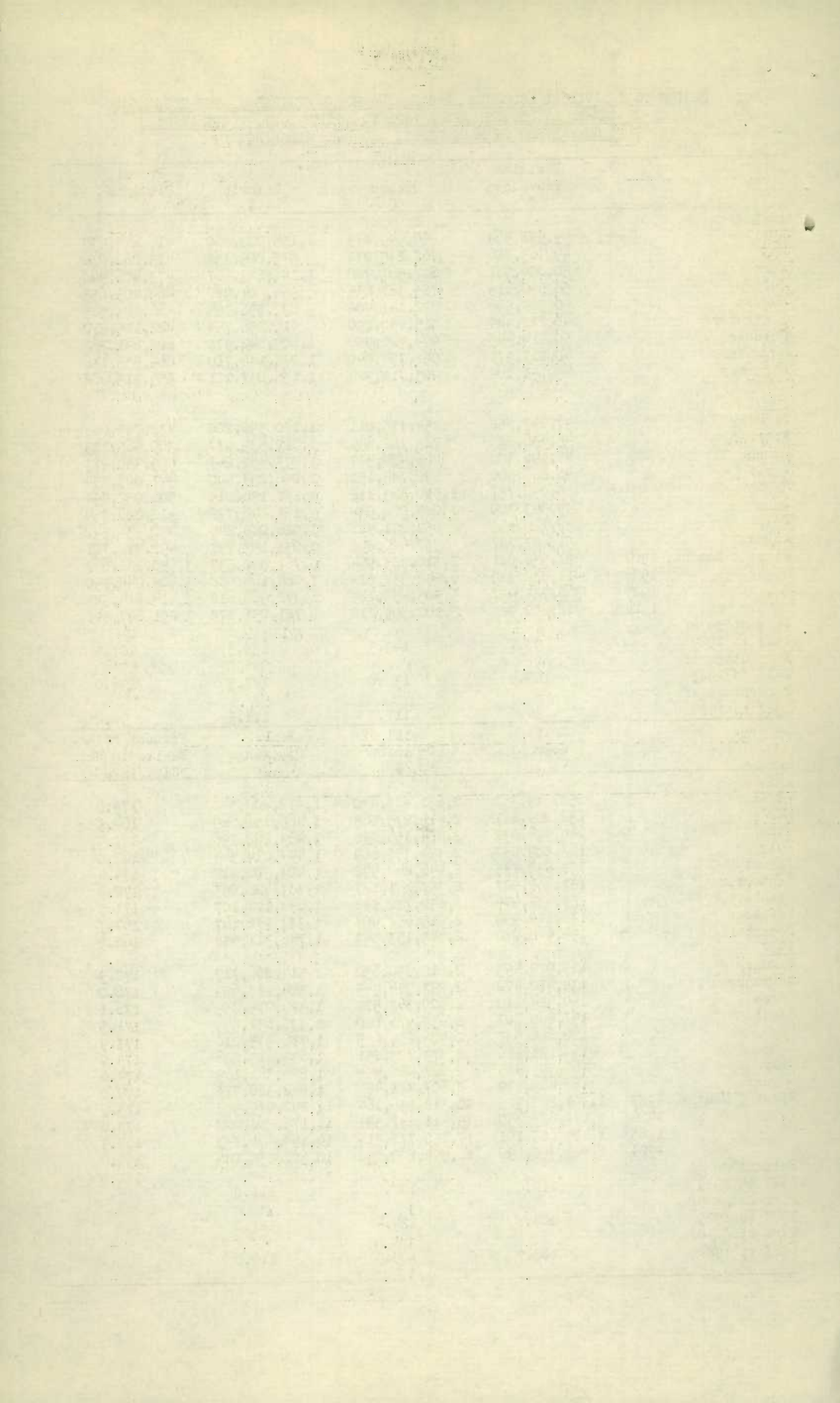






2. DEBITS TO INDIVIDUAL ACCOUNTS AT CLEARING HOUSE CENTRES IN THE ECONOMIC AREAS OF CANADA BY MONTHS, APRIL 1926 TO AUGUST 1927, TOGETHER WITH A COMPARISON OF BANK DEBITS AND BANK CLEARINGS.

	Maritime Provinces \$	Quebec \$	Ontario \$	Prairie Provinces \$
<u>1926</u>				
April	49,952,564	350,949,479	1,155,035,030	416,644,930
May	49,763,406	762,235,074	975,205,752	475,262,076
June	50,054,587	807,567,722	1,183,223,667	477,406,988
July	58,570,615	783,367,635	954,801,928	464,405,653
August	50,503,566	872,141,402	898,598,704	466,103,535
September	45,713,444	815,750,190	910,956,754	427,115,212
October	50,119,445	934,740,930	1,009,842,978	623,641,363
November	48,117,971	952,754,140	1,073,140,710	664,535,136
December	49,751,102	903,711,926	1,135,237,121	559,513,662
<u>1927</u>				
January	47,297,352	854,175,011	1,120,590,208	432,795,066
February	45,436,324	783,162,631	1,019,539,377	309,465,139
March	47,796,336	865,484,547	1,073,432,247	453,330,273
April	48,266,560	890,745,151	1,096,294,303	447,003,734
May	50,990,737	1,010,369,112	1,233,136,019	506,052,834
June	49,943,300	1,089,266,034	1,154,146,732	413,226,359
July	56,128,635	953,681,466	1,026,083,849	430,934,541
August	51,687,787	853,640,602	1,035,153,797	492,374,721
First 3 Months, 1927	397,543,031	7,310,523,954	8,763,382,537	3,540,132,667
1926	411,032,710	6,252,534,573	7,864,166,038	3,605,340,690
1925	366,734,937	5,303,453,129	6,872,565,612	3,414,414,535
1924	402,620,925	5,102,509,712	6,721,051,179	3,251,697,546
Percentage of 1927 to 1924	93.7	143.3	130.5	107.9
Percentage of 1927 to 1925	103.4	136.0	127.5	136.0
Percentage of 1927 to 1926	96.3	117.0	111.5	93.2
	British Columbia \$	Total of Dominion \$	Bank Clearings \$	Percent of Bk. Debits to Bk. Clearings %
<u>1926</u>				
April	158,849,387	2,631,437,440	1,472,403,343	179.0
May	152,809,281	2,415,275,539	1,465,171,669	164.9
June	160,904,032	2,634,156,996	1,469,252,796	182.9
July	163,209,333	2,424,355,669	1,444,014,544	163.0
August	153,892,735	2,446,244,992	1,403,506,913	174.4
September	157,660,527	2,357,131,127	1,333,628,097	170.5
October	157,437,979	2,830,732,750	1,643,177,107	171.9
November	172,110,950	2,915,658,907	1,737,742,667	167.7
December	194,940,032	2,843,153,843	1,746,311,436	162.9
<u>1927</u>				
January	163,972,493	2,613,830,630	1,514,206,719	172.9
February	135,472,472	2,293,076,943	1,304,673,659	176.0
March	160,324,113	2,600,367,371	1,476,275,355	176.1
April	157,660,327	2,639,971,030	1,533,651,555	171.5
May	130,636,957	2,986,235,659	1,716,975,010	173.9
June	163,121,426	2,879,703,351	1,654,615,026	174.0
July	165,595,453	2,637,423,944	1,544,361,169	174.0
August	169,465,179	2,607,321,486	1,542,320,379	169.0
First 3 Months, 1927	1,301,293,925	21,312,936,164	12,292,079,372	173.5
1926	1,277,633,330	19,411,257,391	11,175,568,608	173.8
1925	1,193,605,101	17,150,778,314	10,154,461,743	163.9
1924	1,116,350,490	16,594,229,352	10,507,132,286	153.0
Percentage of 1927 to 1924	112.0	123.6	117.0	-
Percentage of 1927 to 1925	109.1	124.4	121.0	-
Percentage of 1927 to 1926	102.0	109.9	110.0	-





3. BANK DEBITS IN MILLIONS OF DOLLARS IN ECONOMIC AREAS AND PRINCIPAL CLEARING CENTRES OF CANADA IN AUGUST, 1924 to 1927.

	Month of August				Per-centage of 1927 to 1925	Per-centage of 1927 to 1926
	1924	1925	1926	1927		
	Millions of Dollars					
Maritime Provinces	54.1	46.8	50.5	51.7	110.5	102.4
Quebec	609.9	666.4	872.1	858.6	123.8	98.5
Montreal	557.6	604.5	810.7	786.5	130.0	87.1
Ontario	752.7	812.4	898.6	1,035.2	127.5	115.5
Toronto	525.9	506.4	619.1	737.4	145.0	119.0
Prairie Provinces	371.1	405.7	466.1	492.4	121.5	105.6
Winnipeg	256.9	265.9	313.3	311.6	117.3	99.4
British Columbia	139.3	158.8	158.9	169.5	106.7	106.0
Vancouver	116.2	128.6	124.1	132.8	103.2	107.0
Canada.....	1,927.1	2,090.2	2,446.2	2,607.3	124.6	106.5

4. BANK DEPOSITS AND BANK DEBITS AND RATIO OF DEBITS TO DEPOSITS, JANUARY 1925 TO AUGUST 1927.

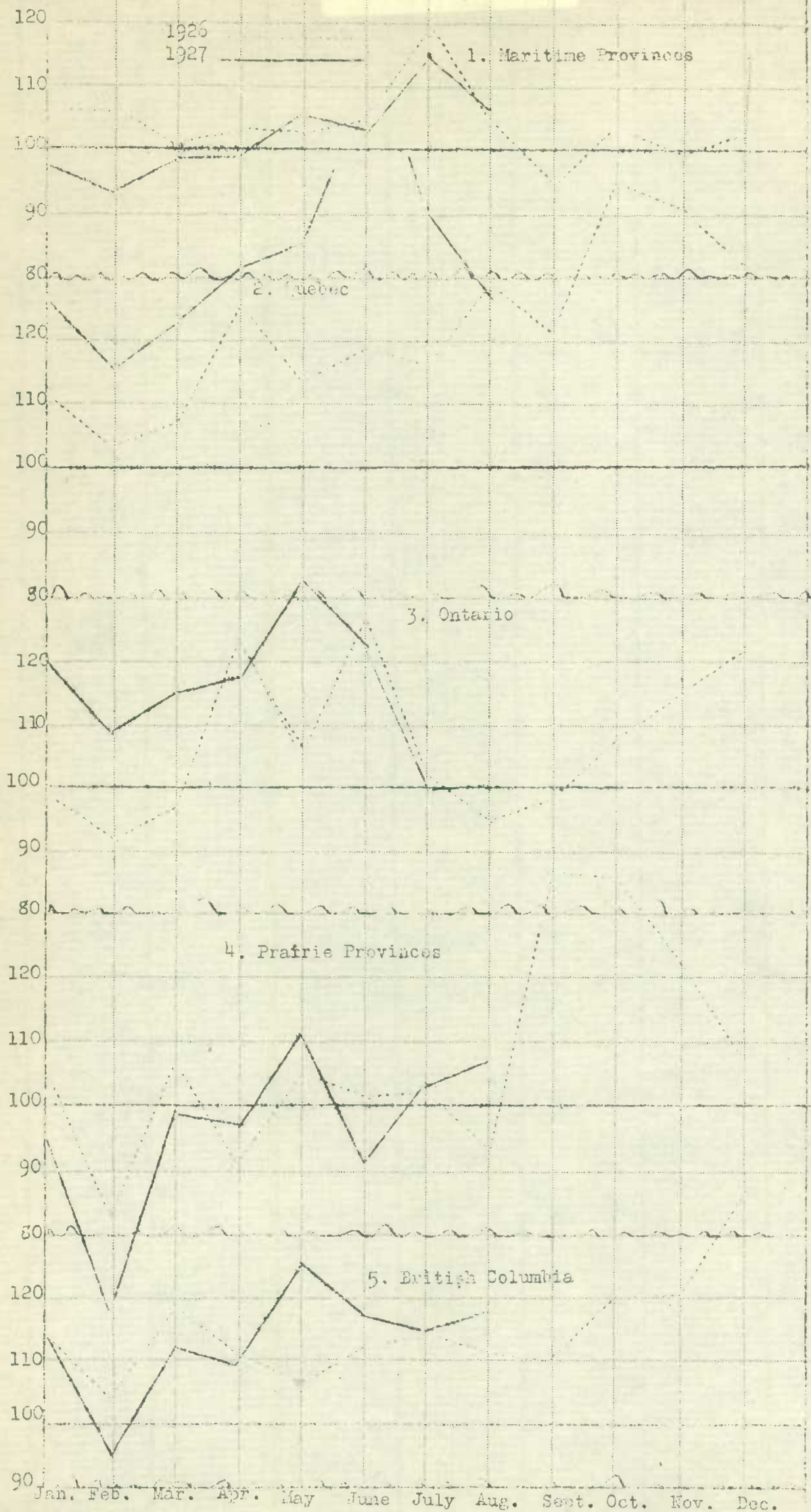
	Demand and Notice Deposits in Canada as at last day of pre- ceding month (000's omitted)	Bank Debits (000's omitted)	Percentage of Bank Debits to Deposits in Canada %
<u>1925</u>			
January	1,832,936	2,230,036	121.6
February	1,752,412	1,915,042	109.2
March	1,743,706	2,005,027	115.0
April	1,757,678	2,229,175	126.9
May	1,777,186	2,281,818	128.3
June	1,732,604	2,151,207	124.2
July	1,749,192	2,248,362	128.5
August	1,735,823	2,090,152	120.5
September	1,755,936	2,195,917	125.0
October	1,838,500	2,872,036	154.6
November	1,876,250	2,786,635	148.4
December	1,953,068	3,120,645	159.5
Average.....	1,793,774	2,343,836	130.6
<u>1926</u>			
January	1,916,325	2,368,210	123.5
February	1,840,297	3,132,220	116.0
March	1,842,302	2,309,312	125.2
April	1,897,262	2,631,481	138.9
May	1,877,713	2,415,276	128.6
June	1,840,297	2,684,157	145.7
July	1,880,723	2,424,356	128.9
August	1,868,987	2,446,245	131.0
September	1,875,592	2,357,181	127.0
October	1,894,311	2,830,783	149.5
November	1,923,494	2,915,659	151.5
December	1,970,178	2,843,154	144.4
Average.....	1,885,623	2,529,836	134.0
<u>1927</u>			
January	1,981,653	2,618,831	132.0
February	1,941,218	2,293,077	118.1
March	1,926,134	2,600,368	135.0
April	1,947,947	2,639,971	135.5
May	1,970,085	2,986,236	151.5
June	1,973,122	2,879,704	145.9
July	1,975,750	2,687,429	136.0
August	1,930,142	2,607,321	135.0





Percentage

Index Numbers of Bank Debits in the Economic Areas  
based on 1924 equalling 100.



STATISTICS CANADA LIBRARY  
BIBLIOTHÈQUE STATISTIQUE CANADA



1010518343