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SLAVE COMPENSATION FUND.

RETURN to an Order of the Honourable The House of Commons, dated 17 August 1836 ;--for,

- A STATEMENT of the Provision made for the Payment of the COMPENSATION, and of the Amount remaining to be provided for on the 8th August 1836.
- REPORT of the ACTUARY of the NATIONAL DEBT OFFICE, with reference to the terms of the Contract for the Loan of £.15,000,000, under the provisions of the Act 3 and 4 WILL. IV. c. 73, for compensating the Owners of Slaves; with Appendix.
- STATEMENT of the Account of the COMMISSIONERS for the REDUCTION of the NATIONAL DEBT, of the sums received and paid at the BANK OF ENGLAND on account of the "West India Compensation," under the Act 3 and 4 WILL. IV. c. 73, between 8th August 1835 and 12th August 1836.
- ACCOUNT of the DEFICIENCY BILLS, and the INTEREST charged thereon, in each Quarter, commencing 5th July 1835, up to the present time.
- STATEMENT of the AMOUNT that would have been paid up on Account of the LOAN for \pounds . 15,000,000, at the period for the payment of each Instalment under the Contract; and of the Amount of the Compensation which had been awarded for payment, at the same periods.

(Mr. Baring.)

Ordered by The House of Commons, to be Printed, 19 August 1836. STATEMENT of the Provision made for the Payment of the COMPENSATION assigned by the Act 3 & 4 WILL. IV. c. 73, and of the Amount remaining to be provided for on the 8th August 1836.

PROVISION made for the Payment of Compensation:

Loan	of	-	-	-	-	- :	E. 15,	000,0	00		
Principal naid up -		-	-	-	-	_	_	_	£. 14,999,640	s. —	d. -
Discount allowed	d	-	-	-	-	-	-	-	228,966	14	7
Money received -		-	-	-	-	-	-	- [14,770,673	5	5
Further to be receive	d on	the	Loan	-	-	-	-	-	360	-	-
Stock created, &c. b claims arising in duced Three and a	y 5 8 Barb Hal	& 6 adoe If per	W11.L. s, 1,73 r Cent	IV. 34,35 . Ani	c. 45, 3 <i>l</i> . 12 111 12	to d s. 7 <i>d</i> , equa	ischa 1. in 1 al to	rge Re- -	1,721,345	19	7
Τοται ρ	rovid	led fo	or	-	-	-	-	-	16,492,379	5	-
Remainir	ng to	be j	provide	ed	-	-	-	-	3,507,620	15	_
							-	£.	20,000,000	_	

COMPENSATION awarded and paid, or payable on Demand of the Parties, at this date :---

						£.	s.	d.
Sundry Colonies payable in Money	-	-	-	-	-	14,737,450	15	11 1
Barbadoes, payable in Stock -	-	-	-	-	£.	1,691,249	8	2

Remaining available, at this date, of the before-mentioned provision :---

Money	-	-	-	-	-	-	-	-	-	-	(£. 33,582	s. 9	d. 5 ½
Stock for	r Clain	ms in	Barb	adoes	-	-	-	-	-	£.		30,096	11	5

The further Act in progress provides for the payment of the amount of 3,507,620 l. 15s. before-mentioned, by empowering the Lords of the Treasury to appropriate the Quarterly Surplus Revenue for this purpose; and also authorizes the creation of $3\frac{1}{2}$ per Cent. Stock equal to 3,432,974 l. os. 1d. being the portion of the above-mentioned amount payable for Compensation for the Mauritius, the Cape of Good Hope, and the Virgin Islands, which Stock will be available to discharge Awards, which the Surplus Revenue may not be sufficient to meet.

TO THE RIGHT HONOURABLE THE LORDS COMMISSIONERS OF HIS MAJESTY'S TREASURY.

The REPORT of John Finlaison, Actuary of the National Debt, and Government Calculator.

May it please your Lordships,

THE Right Honourable the Chancellor of the Exchequer having transmitted to me a copy of the Votes of the Honourable House of Commons on 4th Sept. last, in which are set forth certain Resolutions respecting the late Loan, which had been proposed to that Honourable House, but not acceded to; and having commanded me to examine those Resolutions "in the most careful and minute manner, both in respect to the allegations of fact which they contain, and the reasonings upon those allegations, and to compare the conditions under which the contract between the Treasury and Messrs. Rothschild has been entered into, with the results which would have attended the suggestions contained in the proposed Resolutions;" and having further commanded me to "observe distinctly and separately upon each Resolution; stating my own opinion thereon, and adding, by way of explanation to the whole, the calculations which should lead to my conclusions;" and being further directed to investigate and compare the conditions of the late Loan as affecting the public interests with those which would have ensued from Mr. Rothschild's offer, and also with the maximum charge as authorized by the Act, showing such difference, both in annual charge and in the corresponding capital; and being moreover instructed to compare the charge of the present Loan, as effected, with the charge which would have resulted from the average price of the like public securities during the preceding six years ;-

In obedience to all those directions, I beg leave to report to your Lordships as follows: By a clause in the Act 3 & 4 of the King, c. 73, for granting compensation to the owners of slaves, your Lordships were limited, in raising any Loan for that purpose, to this condition : that the rate of interest at which it should be raised was to be governed by the price of the respective public securities in which the contract might be made, on the day preceding the date of giving notice of any such loan; and the rate of interest to be allowed to the contributors was in no case to exceed 5s. per 100*l*. per annum above the current rate of interest produced by the market-price of such securities respectively on that day.

Public notice was given on the 25th July last, by the Right Honourable the Chancellor of the Exchequer, of his intention to effect a Loan, proposing a conference on the 29th July, with any persons desirous of contracting for the same, and reserving all further information until such conference took place.

A meeting was held accordingly, at the appointed time, when the Loan was declared to be for Fifteen Millions of money, payable in many instalments, reaching over an interval of 403 days, but subject to the usual discount, at the rate of two per cent. per annum, for ready money, in respect of the unpaid instalments.

This discount being the same as 1 l. 19s. 9 d. for every 100 l. of the gross capital wanted, the parties contracting had the option of paying down 981. os. 3d. in the first instance, or 1001. by the stipulated instalments. If they chose the former, 14,701,8751 in money was all they were required to pay; and this circumstance must be carefully remembered, inasmuch as the Resolutions moved in the House of Commons proceed all along on the contrary supposition, that Fifteen Millions in money was to be received clear of discount, in which case the Loan to be raised, if paid by instalments, must have been 15,304,170 l. in order to include

the sum from which the discount, if claimed, was to be defrayed. The parties were to receive for every such 98*l*. os. 3*d*. in ready money, 25*l*. in the Three per Cents. Reduced, and 75*l*. in Three per Cent. Consols, together with a portion of Long Annuity; each of those public securities to include the fractional part of the next dividend which should have accrued upon them at the date of contract. The person who might be contented with the least quantity of Long Annuity was to be preferred; but if his offer did not come down to a certain undiscovered point, there was to be no contract. The bidding took place on Monday the 3d of August, when a sealed paper was produced

by the Minister, containing the lowest offer in Long Annuity which he would receive. The only candidate being Mr. Rothschild, his offer was, that he would accept 14s. 11d. of Long Annuity in addition to the stock before mentioned, being 111,875l. of Long Annuity altogether. The sealed paper being referred to, it was found that the Minister would consent to no more than 13s. 7d. in the Long Annuity, or 101,875l. in the whole, being a dif-With this last condition, after some hesitation, Mr. Rothsference of 10,000*l*. per annum. child complied, and made the contract.

Such are the particulars which must be attended to in computing the conditions on which the loan was effected. It appears evident that the current market-price contemplated by the Act, was the price on the date when the money market was uninfluenced by the apprehension of any Loan whatsoever, and this is no other than the price of Friday the 24th of July.

The rate of interest for money which was yielded by each of the three public securities in question, on that particular day, will therefore fall to be determined, because when to each 597.

each of those rates there shall be added 5s. per 100l., the increased rates are the limits within which your Lordships were circumscribed in contracting.

In the annexed arithmetical note, Problem I., it is shown, that in respect of Long Annuity, the price* being for 1 l. per annum - - - - - - \pounds . 16 18 9

usy; ene price woung 1						
The interest in perpetuity for a million of money Which the Act gave power to increase by -	7 is - -	-	- £ -	33,276 2,500	-	_
Thus raising the rate to	-	-	- 4	£.35,776	-	
In respect of 2 per Cents. Reduced, the price of	f 100	l. Stock	being	£. 91		
The interest in perpetuity for a million of mone	y is	-		33,285	18	-
Which the Act allowed to be increased to -	-	-		35,785	18	-
or $3l$. 11 s. $6\frac{36}{100}d$. for 100 l.	ofic	ol Ste	ck bei	nor £ .00	7	6
And in respect of 3 per Cent. Consols, the price		_		22 251	1	_
The interest in hernelinty of a minibul of money	** 4.3			00,~0*	- T	

or $3l. 11s. 6 \frac{3}{100}d$ for 100l.

And it is further demonstrated, that on the 3d of August 1835, it was within your Lordships' discretion, from those premises, to have accepted any offer in Long Annuity not exceeding 16s. $7\frac{1}{4}d$. per 100*l*., and therefore to have allotted to the contractor a total sum in Long Annuity of 124,479*l*. 14*s.*, being 22,604*l*. 14*s*. per annum more than he eventually received.

The rate of interest at which the loan was in reality contracted is also shown in Problem II. to have been so nearly 34,776l. 10s. per million (or 3l. 9s. $6\frac{64}{100}d$. for 100l.), that the conditions of the very complicated problem by which it is proved are all complied with to less than an error of 8l. on the whole capital advanced, and nearer than this no man is able to carry the operation by any means of computation at present known.

It thence results, That out of the total capital composing the Loan	• £.15,000 • 298),00 0 3,125		-	
Leaving the contractor to pay down But the latter sum is not wholly capital put out to interest, a part of it is compensation for the dividends which, on 3d of August, had accrued on the Stock and Long Annuity allotted to the contractor; viz.	£. 14,701	,875 0,563	-	-	
So that the sum received purely as capital is only	14,621	,311	7	11	
And it is moreover shown, that for this sum of money the total charge on the nation is equivalent to a perpetual annuity of Of which the dividends of 15,000,000 <i>l</i> . in 3 per Cent. Stock is And the equivalent of 101,875 <i>l</i> . in Long Annuity is		0,000 3,478	50 		8
The whole being equal to a capital in 3 per Cent. Stock of -	-	- £.1	16 , 9	49,26	8

The saving then effected by your Lordships having declined to exercise your discretion to the full extent of the legal limits, is, at the above rate of interest,

-	
• -	-
• •	-
• •	
	 ; -

Such being the simple state of the facts, it is now my duty to advert to the Resolutions referred to me to examine.⁺

In the outset I would beg leave to mention, that to determine with due accuracy the conditions of a Loan, when its component parts are some of them in annuities for terms of years, others in perpetual annuities payable at different times in the year, and each part carrying a fraction of interest which had accrued on the date of contract, perfectly different from that which is carried by any other part, is, to me at least, no very simple operation.

I am not aware that it has ever been done before, and therefore it was necessary to discover the formula by which it should be worked out, as in Problem II. The only Loan, during my service under your Lordships' Board, was that contracted for by the Bank in 1823 for upwards of 13 millions of money, which, being in one terminable annuity, presented no difficulty. The rate of interest required by the Bank, and allowed by your Lordships' predecessors

^{*} The prices of 24th July and 3d August, authenticated by the Government Broker, will be found in the Appendix.

⁺ See a copy of them in the Appendix ; viz., the last paper.

decessors on that occasion, was 4*l*. 2s. 1*d*. per cent., or 41,041*l*. 13s. 4*d*. per million; and it may be just mentioned, in passing, that if your Lordships had now allowed the same terms, the perpetual charge to the country would have been equal to 600,083*l*. per annum, instead of 508,478*l*.; or, in 3 per Cent. Stock, to 20,002,767*l*., instead of 16,949,268*l*. The conditions of the present Loan, however, are much more complicated.

The two first Resolutions, which are in fact one and the same, aim at the solution of this problem; and although incorrect in reasoning, as is shown in the arithmetical note, yet the results arrived at are so near the truth that I am convinced the calculator who constructed them had no hand in framing any of the others. The arithmetical skill shown in the first could not, unless wilfully—a thing not to be supposed—have fallen into the mistakes displayed by all the rest.

The 3d Resolution is merely a truism; it only states the permanent and temporary charge entailed on the country by the Loan as effected.

The 4th Resolution is wrong. Fifteen Millions of money are imagined to have been advanced by the contractor, clear of the accrued dividends, and clear also of the discount to be allowed, whereas 14,621,311 *l*. in money was all that was paid in the nature of capital.

The 5th and 6th Resolutions are quite wrong for the same and other reasons; but having no connexion with any of the conclusions subsequently arrived at, and being in very truth wholly superfluous, they may be passed over in silence.

The other six Resolutions demand a more minute examination, and I cannot help regretting that it should fall to me as a matter of duty to be obliged to report to your Lordships that they form one continued tissue of the most astonishing errors; many of which, indeed, are obvious at the first glance. They moreover contradict each other repeatedly, so that it is impossible for a man to assent to any two of them without being compelled to deny his own words in respect of the one or the other.

The fundamental principle of them is, that it is an absolute matter of fact, that, on 3d August 1835, any capital that might have been created in $3\frac{1}{2}$ per Cent. Stock, guaranteed against reduction for 15 years, would at the expiration of that term be, *ipso facto*, forthwith reducible to 3 per Cent. Stock. And if this indeed were the conditions of a Loan to be raised in capital of such a description, it is very plain that any such capital was nothing else than 3 per Cent. Stock in the first instance, having an annuity of ten shillings, continuing payable for 15 years, superadded to each 100*l*. of Stock.

The resolutions proceed on the basis that the late Loan might have been effected on those conditions. The 10th Resolution declares that the fault of not so doing has occasioned a loss to the country, after the expiration of 15 years, all things being equal in the meantime, " of a permanent annuity of 52,187l. 10s. for ever," the present value of which interest being reckoned at " $3\frac{1}{2}$ per cent. during 15 years, and at 3 per cent. for ever after, is 1,038,341l. 12s." in ready money. Now, as a permanent annuity of 52,187l. 10s. issues from a capital in 3 per Cent. Stock of 1,739,583l. 6s. 8d., it follows that this is the increase of debt in capital which is entailed on the nation by not adopting the preferable plan suggested; and to prove that this is the very sum, of which the present value in ready money is 1,038,341l. 12s., we may look into a book of interest under the rate of $3\frac{1}{2}$ per cent., where we find that when interest is only payable once a year, the present value of 1l, which is not due until 15 years, is the fraction .596891, or 11s. $11\frac{1}{4}d$., very nearly. If by this fraction we multiply the capital of 1,739,583l. 6s. 8d., which is said to be lost, the product or present value is exactly 1,038,341l. 12s., as stated in the 10th Resolution.*

But the 10th Resolution is derived from the 9th, which states as follows :-- "Supposing the 32 per Cents. to be reduced to 3 per Cents after 15 years, the amount will stand thus :--

The rate of interest at which the present Loan is contracted for, is - The rate of interest on a $3\frac{1}{2}$ per Cent. Stock reduced to a 3 per Cent. Stock is, at the end of 15 years \pounds . 3 Add the perpetual annuity arising from the loss of $4l.2s.$, being the accumulation of the excess of interest of $4s.3d$.	£. 3	s. 9	d. 5
paid during 15 years 2 5 1/2	3	2	5]
Showing a difference of $ \pounds$.	-	6	11 🛔

per cent. payable for ever after, on the whole Fifteen Millions, as at present contracted for, more than would have been payable if the Loan had been raised as a $3\frac{1}{2}$ per Cent. Loan."

When

^{*} It may be observed, by the way, that this reckoning is not quite fair. All public annuities in this country are payable half-yearly, and therefore the fraction that should have been adopted as the multiplier is .5942476365, in which case the present value would have been a loss of 1,033,743*l*. 6s. But this is unimportant to the argument.

When those five items are raised from their relation to 100*l*. money to the case of Fifteen Millions in money, they become respectively as under :---

Interest of the Loan as contracted for	t. s. d. 520,625	
Ditto of a 3 ½ per Cent. Stock when reduced to a 3 per Cent. Stock £.450,000		
lost by accumulation, &c 18,437 10 -	468,437 10 -	
Showing a difference of $ \pounds$.	52,187 10 -	-

which difference, it is to be observed, is the very sum mentioned in the 10th Resolution as the permanent annuity lost, every thing being here in simple proportion; and thus far there is no mistake as to the intent and meaning of the Resolution.

Now, if once more we raise the several sums above-mentioned from their character as perpetual annuities into their form as capitals in 3 per Cent. Stock, producing the like annuities, those five items must needs stand respectively, as follows :--

	<i>L</i> .	S.	u_{\bullet}
Capital of the Loan as contracted for in 3 per Cents	17,354,166	13	4
Ditto of the $3\frac{1}{2}$ per Cent. Stock, when reduced to a			
3 per Cent. Stock £. 15,000,000			
Add the capital in $3\frac{1}{2}$ per Cents. lost by the accu-			
mulation of interest, &c 614,583 6 8	1		
, 	15,614,583	6	8
Showing a difference of $ \pounds$.	1,739,583	6	8

which difference is the very same as the sum already inferred from the 10th Resolution to have been the increase of capital debt entailed on the country from the omission of raising the Loan in $3\frac{1}{2}$ per Cents. Therefore the capital that must have existed in the form of $3\frac{1}{2}$ per Cent. Stock previously to the reduction, is the lesser item of 15,614,583l. 6 s. 8 d.

But all this part of the 9th Resolution is derived from a preceding part thereof, which states that-

"To borrow in a 31 per Cent. Stock at the	price	of	97 <i>l.</i> ,	reduced	by disc	our	nt to
95 l. 1s. 7 d., is to pay interest at the rate of	-	-	-		£.3 1	3	8
The present Loan is contracted for at the rate of	-	-	•		3	9	5

Showing a greater rate of interest of - - - \pounds - 4 3

paid on the $3\frac{1}{2}$ per Cent. Loan, which difference of 4s. 3d., in the rate of interest, is an annuity; and an annuity of 4s. 3d., interest being reckoned at $3\frac{1}{2}$ per cent., will increase in 15 years to a sum of 4l. 2s., which sum again, interest being reckoned at 3 per cent., is equivalent to a perpetual annuity of 2s. $5\frac{1}{2}d$."

Now, when 100 l. of money, invested in 31 per Cents., yields in	£. s	. <i>d</i> .
Fifteen Millions in money will yield	552,500	
Which represent in 3 $\frac{1}{2}$ per Cents. a capital of £.15,785,714 6 -		
And when 100l. of money, invested in 3 per Cent.		
Fifteen millions would give	520,625	
The difference of interest is	01 855	
The difference of interest is	31,075	
And if an annuity of 4s. 3d. will increase in 15 years to a capital of		
41. 2 s., the annuity of 31,875 l. will in like manner increase to a		
capital acquired by accumulation of $-$ - $\pounds.615,049$ 16 8		
Now, add the original capital in $3\frac{1}{2}$ per Cents.		
acquired by the first investment as above - 15,785,714 6 -		
The total will be in capital $-f_{16,400,764}$		
When these are both reduced to a oner Cont Stock the dividends of		
when these are both reduced to a 3 per Cent. Stock, the dividends of	- 0	
the lesser item will still be	18,451	9 11
Those of the larger item will be	473,571	87
Both are $ \pounds$.	492,022 1	8 6
Representing, when reduced, the same aggregate capital as is just		
now mentioned above £. 16,400,764 2 8		
And whereas the Loan, as contracted, gave in		
interest as above-mentioned	520.625	
Representing a capital in 3 per Cents. of - 17.354.166 13 4	00	
It appears that by the Loan, as effected, there is		
an excess of capital of £. 953,402 10 8		
And an excess of permanent yearly charge of $ f$.	28,602	1 6

Moreover

"That from these facts (meaning all the previous statements) it appears, that if the Chancellor of the Exchequer had raised the Fifteen Millions in a $3\frac{1}{2}$ per Cent. Stock at 97 *l*. reducible in 15 years to a 3 per Cent. Stock, this would have been equivalent to a nett price of 92l. 9s. 1 *d*. for 100*l*. Consols, instead of the nett price of 86l. 9s. 5d. which he receives by the present contract, being a loss of 5l. 19s. 8d. per cent., commencing from the present time, and exclusive also of the increased amount of the capital of the debt."

If this were true the loss would have been much greater than 5 <i>l</i> . 19 <i>s</i> . 8 <i>d</i> . pe as $92l.9s.1d$. bears the same proportion to $86l.9s.5d$., which 100 <i>l</i> . bears to 9 difference being $6l.9s.5\frac{1}{4}d$. per cent. So that on the whole Loan, instead of there would only have been 14,029,248 <i>l</i> . 15 <i>s</i> . of money forthcoming, where known, that the contractor was called on to pay 14,701,875 <i>l</i> . and did pay it. over, when $92l.9s.1d$. is "the nett price" of 100 <i>l</i> . in Consols, the rate of money is $3l.4s.10\frac{2}{4}d$. very nearly, and on Fifteen Millions, it constit annuity of 1 . 1 . Spectral which, according to the resolution, must have existed in the form of $3\frac{1}{2}$ per Cent. Stock, before it came thus, after 15 years, to be reduced to 3 per Cents.; when it is compared with	r cent., If 3l. 105. (f Fifteen as the fac But, pas interest utes a p 486,727 224,257	$\begin{array}{c} \begin{array}{c} \text{fash}\\ 5\frac{2}{3} d.\\ \text{Mill}\\ \text{sing}\\ \text{for 1}\\ \text{for 1}\\ \text{erpe}\\ 14\\ 5 \end{array}$, the ions well this oo <i>l</i> . etual 6 4
the capital at which it is in the foregoing statements asserted that the Loan was actually effected, viz., in 3 per Cent. Stock - 17,	354,166	13	4
We find there is an addition to the National Debt by the Loan as contracted in capital of $ \pounds$ 1, And whereas the interest of the Loan as effected was in the forego-	129,909 520 625	8	4
While by this, the 12th Resolution, it should only have been	486,727	14	6
The difference is a loss in permanent yearly charge of $ f$. Thus, my Lords, from the first part of the 9th Resolution, it mani-	33, ⁸ 97	5	6
Cents. to be originally created must have been 15, The further capital in the same 31 per cents., which in 15 years	785,714	6	-
would have accumulated from the excess of interest being -	615,049	16	8
Becoming when reduced to 3 per Cents. a total of $ \pounds$.16, But from the last part of the same Resolution it is incontestable that	400,764	2	8(ª)
the capital in $3\frac{1}{2}$ per Cents. to be originally created must only be 15, And the further capital arising from accumulation must be	000,000 614,583	6	8
Becoming when reduced to 3 per Cents. a total of $-$ - \pounds .15,	614,583	6	8(b)
The 7th Resolution, however, asserts expressly that by the plan sug- gested, the total capital added to the debt of the country would have been -	776,327	_	-(°)
While from the 12th Resolution it is no less a manifest certainty that this capital was	^{224,2} 57	5	(d)

Your Lordships will doubtless require to know from me which of those four contradictory propositions, (a), (b), (c) or (d) is the true.

May it please your Lordships to be assured that there is not one of them true. They will each of them be once more contradicted by the 2d and 3d Resolutions.

each of them be once more contradicted by the 2 the first part of the			
In the next place, it evidently appears from the first part of the			
oth Resolution that, by the method on which the Loan was			
effected as compared with the plan suggested, an excess of capital			
is added to the debt of the nation in 3 per Cent. Stock, to the			_
autont of	953,402	10	8(°)
D the the last part of the same Resolution, and by the 10th Re-			
But by the last part of the sume reconciliant the excess of capital so			
solution, it is no less clearly proved that the excess of capital as	1.730.583	6	80
added to the debt is	-110900-0	•	•()
In the 8th and 11th Resolutions, nowever, it is expressly de-			
clared that the increase in the capital of the debt by the present			(~)
Loan in the New 3 ¹ / ₂ per Cent. Stock is	1,570,503		-(8)
While it results of necessity from the 12th Resolution that such ex-		~	
coss of capital is	1,129,909	8	_4(ⁿ)
A different Lordships should inquire which of those four assertions	s, (e), (f), (g)) or (h) so
And it your hordships should inquire answer must be as before.	-none of	then	n are
repugnant to each other, is the truth, the unlist dur that the Loon in c	1 nor Cont	a 96	nro-

true. On the contray, it will be shown immediately that the Loan in 31 per Cents, as proposed, would have increased the capital of the National Debt beyond the amount added by the Loan as effected.

Lastly, by the 10th Resolution it is declared that the loss to the public by the Loan as effected, compared with the plan proposed, is a "permanent annuity," the payment of which commences at the end of 15 years of 7

The present value of which, interest being reckoned at 3 ¹ / ₂ per Cent. during 15 years, and at 3 per cent. for ever after, is	1,038,341 12	9(ⁱ)
But the 8th and 11th Resolution, in affirming that the excess of		
anital added to the debt is 1,570,563 l. implies of course, that		
the "permanent annuity" added is simply the dividends thereof,		
at 3 per cent., which would be	47,116 17	10
The present value of which, at the same rate of interest as above,	_	
would therefore be	937,454 18	5(^k)
It is shown to result of necessity, from the first part of the 9th		
Resolution, that the "permanent annuity" lost to the nation by		
not adopting the plan suggested is	28,602 1	6
In which case the present value of it is a loss of	569,077 8	-(¹)
Lastly it is shown to result from the 12th Resolution, that the	- • ••	
"permanent annuity" lost could be no other than	33,897 6	10
And in this case its present value is a loss of	674,434 -	-(^m)

Now, if your Lordships should once more inquire which of those conflicting statements. (i), $\binom{k}{1}$ or $\binom{m}{2}$ is the true one, the answer is still as before,—there is not a word of truth in any one of them. No such losses, nor any others, have been at all sustained.

And although it is very difficult to conceive why that should be asserted as an arithmetical fact, which is merely a fiction of the imagination, there is no difficulty in explaining to your Lordships why the Resolutions contradict one another.

Both sums, assuming the facts, are correctly stated in the 4th Resolution.

The 7th Resolution states, that if the Loan had been raised in New 3½ per Cent. Stock at 97*l.*, subject to the same discount, the nett price for 100*l*. stock would have been 95*l*. 1s. 7*d.*, which is not precisely the case. One million of Stock would cost 950,721*l*. 5s. money.

In which case the interest of Fifteen Minions of money is $ -$ 2. Representing a capital in 3½ per Cent. Stock of £. 15,777,495 $ -$ Being less than the capital of the Loan as it is alleged to have been effected in 3 per Cents. by $ -$ 1,569,395 $ -$	552,212	U	0
Which as above would have been			
Those three items are much the same as the results set forth in the 7th and 8th Resolutions.	0.00		0
One-seventh of the above interest is to be reduced after 15 years, viz. £.	78,887	9	8
Leaving the interest of 15,777,495 <i>l</i> . when reduced to 3 per Cent. Stock But the Loan as proposed being, in the meantime, per annum – – Whereas in the mode in which it is said to have been effected it is –	473,324 552,212 520,406	¹⁷ 6 14	8
The difference is an annuity for 15 years of If interest be assumed at $3\frac{1}{2}$ per Cent., payable half-yearly, 1 <i>l</i> . of an- nuity will amount in 15 years to 19 <i>l</i> . 10s. 2 <i>d</i> . (or 19.5085753) and	31,805	12	8
therefore 31,805 <i>l</i> . 12 <i>s</i> . 8 <i>d</i> . will amount to - £. 620,482 12 - The interest of which, if reduced to 3 per Cents., is Let us distinguish this item, whether in its form of Capital or Interest, by the Letter (A.)	(A.) 18,614	9	7
Let us add to it the original Capital in 32 per Cent. Stock, in which it is proposed that the Loan ought to have been, as above, effected 15,777,495 And add also the dividends thereof when this last			
shall come to be reduced to 3 per Cents And let this item in either form be denoted by (B.)	473,324	17	_
A. and B. together make up in 3 per Cent. Stock - 16,397,977 12 - While the Loan, as effected, is said to be - 17,346,890 Being after the term of 15 years an excess of capital	491,939 520,406	6 -	7
debt and perpetual yearly charge of 948,912 8 -	28,466	13	5

Now, the cause why the Resolutions contradict each other will immediately be manifest.

In the 8th Resolution the item (A.) is omitted as capital; an error of 620,482*l*. 12*s*. The increase of capital debt, even according to the facts assumed, was not 1,570,568*l*., as therein stated, but only 948,912*l*. 8s., as is just now shown.

The first part of the 9th Resolution is correct according to the reasoning adopted, and not materially wrong in arithmetic.

But the second part of the same Resolution is glaringly wrong. The is 15,777,495 <i>l</i> . in 3½ per Cent. Stock, and is nearly so stated in the 7th the first part of this 9th Resolution is now in the second part mistaker Millions of 3½ per Cent. Stock; an error of 777,495 <i>l</i> . Because 100 <i>l</i> . of	ne item (Resoluti a for on 3½ per C	B.) on, a ly F ent.	which and in ifteen Stock,
CHASE; viz. 100 <i>l</i> . Stock is set down for 105 <i>l</i> . 3s. 8 <i>d</i> . The interest of th reduced to 3 per Cent. Stock, is 3'1555 <i>l</i> . more than £	NEY WO e latter s	ULD sum,	PUR- when
(Corresponding to item (B.) The first Resolution states the interest of the Loan as efforted	' C	о о	•4
The 7th states, that if effected in $3\frac{1}{2}$ per Cents. the in- terest would be	10 7 10		
The excess of the latter, which is an annuity for 15 years is -4 $2\frac{8}{10}$ The amount of which at the end of 15 years is a capital of 4 2 $8\frac{3}{10}$	- 0 00		
The interest of this, when reduced to 3 per Cents. is 0.1241 /. or nearly (Corresponding to item (A.)		- 2	54
Both items (B. and A.) make up 3.2796 <i>l</i> . or	3	5	7
The difference is shown to be without decimals your near	3		4‡
The dimension is shown to be, without decimals, very near	-	• 3	9ž
or more correctly, as is already shown in the preceding page – But the difference is by no means $6s. 11\frac{1}{2}d$. as is asserted in the cor Resolution, showing as is asserted in the 10th Resolution, a perm nent annuity of – – – – – – – – – – – – – – – – – –	£. 28,46 nclusion na- - 52,1 s :	6 1 of th 87	3 5 1e 9th
The rate of interest at which the present Loan is contracted for is - £ The rate of interest on [100 <i>l</i> . of] a 3½ per Cent. Stock reduced to a 3 per Cent. Stock, is at the end of 15 years	. 3	9	5
(Answering to item B.) Add the perpetual annuity arising from the loss of 4 l. 2 s., being the accumulation of the excess of interest of 4 s. 3 d. paid during 15 years 2 51 (Corresponding to item A)			- 1
(Corresponding to item A.)	- 3	2	. <u></u>
Showing a difference of	<u> </u>	6	111
It is palpable that those items should have been,— From Resolution 1st. Interest of the Loan as contracted for From Resolution 7th. Interest of 105 l. 3s. 8 d. of a	3	9	4 i
Stock, after 15 years \pounds . 3 3 1 From the first part of Resolution 9th, "Add the perpetual annuity arising from the loss of 4 l. 2 s. 8 ² / ₄ d., being the accumulation," &c. as above 2 5 ² / ₄			
	- 3	5	7
Showing a difference of		3	9 1

The 12th Resolution is consequently arithmetically wrong. If it be true that a Loan of Fifteen Millions of money will, after 15 years, finally resolve itself into a charge as a permanent annuity of 491,939 *l.* 6 s. 7 d. (being the two items (A.) and (B.) already mentioned), then the rate of interest for 100 *l* money is rather more than 3 *l.* 5 s. 7 d., which infers that the price of 3 per Cent. Consols is 91 *l.* 9 s. 6 d. not 92 *l.* 9 s. 1 d. as the Resolution asserts. It may, moreover, be remarked, that if by any contrivance a Loan were concocted, the conditions of which should substantially amount to this, that 100 *l.* of 3 per Cent Stock is virtually to cost the contractor 92 *l.* 9 s. 1 d. in ready money, it would go near to be thought more than probable that Mr. Rothschild would have found out the ingredients. He might therefore, perhaps, hesitate to pay 92 *l.* 9 s. 1 d. or even 91 *l.* 9 s. 6 d. for an article which on the very day of the Loan was selling in the open market at 89 *l.* 15 s.*

But, my Lords, none of all these Resolutions have any sort of relation to the real facts of the case, except the 3d, which truly states, that the capital added to the National Debt was

* Sce the prices of 3d August in the Appendix.

was just Fifteen Millions of 3 per (of which are set forth, viz., -	Cent. Sto	ck, ne - vears	ither	more 1 - -	nor le - -	ess, t _ _	he yearly di £. 450,000	vide	nds
And the 2d Resolution no less tru	1 shows	s, that	upon	the wl	hole I	loan	of Fifteen M	, 1 illi	ons,
for each nominal 100l. 98 l. os. 3d	l. was to	be pa	id do	wn an	d no	mor	e;		
Therefore in all		-				J£.	14,701,875	-	-
In the annexed arithmetical note total value of the dividends, wh	e, Proble iich on th	em 11., ne 3d o	, it is : f Aug	shown ust hae	that d acci	the ued			
on the stock and annuity, was		~	-	-	-	-	80,563	12	1
	Leaving	ç -	-	-	-	£.	14,621,311	7	11
This last sum and only this mu	h is the	mone	ov that	t in rea	ality v	vas r	wt out to in	teres	st as

This last sum, and only this much, is the money that in reality was put out to interest as

pure capital. If the Loan could have been effected in the New $3\frac{1}{2}$ per Cents., tion for 15 years, at the price of 97 <i>l</i> . for every 100 <i>l</i> . of such Stor- reduced by discount in the proportion of 100 <i>l</i> . to 98 <i>l</i> . 0s. 3 <i>d</i> . beco- for every million of Stock : and on 2d August the value of the div	guara ck, t mes idend	ntee he s £. (d agains aid price 950,721	t red e, wl 5	uc- ben –
which would have accrued on such Stock is, in the arithmetica Problem III., also shown to be	al not -	e -	2,715	18	4 3
Leaving the clear price of one million of Stock in money -	-	- !	948,005	6	7¥
Wherefore it is matter of certainty that the rate of interest is for a million of money, and that the interest of the real sum p pure capital, 14,621,311 l. 7s. 11 d. is	- hich - Cent. -	by th - 15 Stock -	36,919 ne contr 539,813 d result ,423,237 k, the di 462,697 77,116	12 actor from 14 vide 3	$\begin{array}{c} 6 \\ r as \\ 5 \\ n a \\ - \\ nds \\ 8 \\ 9 \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ - \\ -$
Making up the total interest as above		·	539,013		5
Thus far it is perfectly evident that by the plan proposed :	hed. e beet t is 4 'he ex- by the s in Stock plan j nuity char ave l would ey at ns, vi 16.40 11.5	Fif $f \pm f = 1$ $f \pm f \pm$	teen Mil 5,423,23 423,23 423,23 423,23 423,23 423,23 423,23 423,23 532	lions 7 12 annerpet 2 2 ed. 3 1 3 1 3 2 3 2 3 2 3 2 3 2 3 2 3 2 3 2 4 3 2 4 5 4 5 4 5 5 4 5 5 7 1 6 7 1 6 7 1 7 1 7 7 1 7 7 1 7 7 7 7	s in 4 - 4 - uum tual 8 per for 9 - uity 3 for the by e of asse. asse.
So that an income in Long Annuity deferred for 15 years and then only to be entered upon, is worth	4.87 28.57 e first 875 l	7359 7143 - £	years' pi year's pi . 287,028 496,496	urch: urch 5 18 5 19	ase. ase. 6 8
Total present value of both savings - But the excess of perpetual annuity by the plan proposed 12.607/, 25, 8 <i>d</i> , is to be deducted. It is now worth -	being	£	. 783,529 362.77	18	2
So that the nett value of the saving by the plan proposed is	_	- -	. 420 74	, 4 , 10	
co mus me note turne or the surme by the pull proposed is	_	•	• + • • • / 4 /	i •ວ	

The

Brought forward - - £.420,747 13

The cont portion	ractor o which	dema he	anded eventu	10,c ally	oo <i>l</i> . in accept	1 Lo: ted.	ng Its	Annuit value	y b in 1	eyona this e	d tl equ	he a-		17	0	•
tion is	-	-	-	-		-	~	-	-	-	•	-	164,6	65	2	_

The saving if his offer had been accepted would therefore be - - £.585,412 15 7

The question is consequently reduced to this. Is it an absolute fact, as is asserted in the 12th Resolution, that Mr. Rothschild or any other man would have abated of his first demand public securities equivalent to the enormous sum of 585,412l. 15s.7d. in ready money? If this be the truth then certainly there is "a loss to the public" sustained; not indeed of 1,038,341l. 12s. in ready money, besides" an additional loss to the public of 1,570,563l. by the increase of capital of the National Debt," as is asserted in the 11th Resolution, which two sums it was already shown are contradictory of each other; but there is a loss sustained which is the equivalent of 420,747l. 13s.7d. in ready money.

And there is no doubt that by the existing law your Lordships were empowered to grant a perpetual annuity in 3 per Cent. Stock of 462,697 l. 2s. 8 d., together with an annuity for a term of 15 years of 77,116 l. 3s. 9 d. in return for 14,621,311 l. 7s. 11 d. in ready money, if any contractor couldhave been found, able and willing to advance such a sum on those terms.

But this main point, my Lords, which the 12th, and indeed each of the last seven Resolutions, take for granted as an absolute "Fact," is, with deep submission, no fact at all, but quite the contrary, a gratuitous hypothesis, utterly improbable in itself, and even disbelieved by Parliament when it passed the Act for raising this very Loan, which, as before stated, gave power to your Lordships to concede to the contractor a sum of 12,604 l. 14 s. in the Long Annuity, even beyond the amount of his first offer, and of 22,604 l. 14 s. beyond the terms which he ultimately accepted. And if those powers had been acted on such a sum in Long Annuity, the rate of interest being still $3\frac{1}{2}$ per cent. as before, would have been worth in present money - - - f. 372,221 - -

To which, adding the loss sustained according to the hypothesis that the Loan could have been effected on the conditions therein pro-

posed, and above detailed - - - - - - - - 420,748 - -

The loss to the nation would have been - \pounds . 792,969 - -

It is incredible that Parliament, which intended to restrict your Lordship's, could have contemplated such a margin as this in the way of restriction.

To remove all doubt, however, as to the impracticability of the particular suggestion under consideration, and to investigate a matter which your Lordships perhaps may not deem uninteresting at the present moment, I propose the discussion of the more extensive question, whether it might or might not, as a general principle, be expedient to borrow in the $3\frac{1}{2}$ per Cents., or in any other Stock, in which the Loan could be raised, of a still higher denomination; so as to create a lesser capital of debt with a larger annual charge than that which takes place by borrowing in 3 per Cents.; any such higher Stock so created to be guaranteed against reduction for a definite term of years, but thereafter to be reducible or not, according to the circumstances of the country at the time being.

If such a plan were thought expedient, it would have been necessary, as a preliminary measure, to repeal that part of the Slave Indemnity Act which only contemplated dealings in the public securities already existing, and which moreover limited your Lordships within a certain rate of interest (5s. per 100 l.) above the rate yielded by the market-price on the day preceding any intimation of the Loan.

Then the Loan and its intended conditions would fall under Parliamentary discussion before it came to be proposed to the dealers in the money market. Whether that circumstance would tend to depress the market is matter for speculation. Let it be assumed, however, that the repeal would be carried, and that no such depression would have ensued.

The question is, to what term of years must the guarantee extend so as to operate in the way of encouragement to the lenders? This question admits of an arithmetical solution, which is universally applicable to all times and circumstances.

One hundred pounds Stock in the 31 per Cents. must always be at least as valuable as 100*l*. Stock in the 3 per Cents. In the first instance, it is more valuable by reason of the extra 10s. per annum, which is an annuity payable during a term of years, the length of which no one knows. The 31 per Cents. Reduced have their dividends payable in April and October, at the same time as the 3 per Cents. Reduced. The New 31 per Cents. are payable in January and July, the same as the 3 per Cent. Consols, There is a kind of security in the market denominated "New Annuities for terms of years." The New April Annuity which is payable at the same time as the Reduced Stocks, expires at October 1859. The New January Annuity, which is payable at the same time as Consols, expires at January 1860.

On the day of the contract (3d August), the market prices of these public securities were respectively as under :---*

			£.	s.	<i>d</i> .	t .	s.	d.
The price of 31 per Cent. Reduced was	-	-	99	5	-			
That of New 31 per Cents. was -	-	-	-		-	98	7	6
That of 3 per Cents. Reduced was	-	-	90	17	6	Ť	•	
That of 3 per Cents. Consols was	-	-	-	•	-	90	5	-
The differences are respectively	-	-	£.8	7	6	8	2	6

And this difference is manifestly the value which on the 3d of August the dealers in the money market attached to the annuity of 10s., which is of indefinite duration. But on the same day, 1 l. of the New April Annuity cost 16 l. 10 s. **,** 1

			t.	s.	a.	£.	s.	d.
And 1 l. of the New January Annuity sold for	-	-	-		-	16	5	
An Annuity of 10s. would therefore cost -	-	-	8	5	-	8	2	6

But this is identically the difference between New 31 per Cents. and 3 per Cent. Consols. It is therefore quite clear that the operations in the money market, on 3d August, were conducted on the persuasion that the 31 per Cents. cannot be reduced for a term of 241 years yet to come. Consequently if a loan were effected in the $3\frac{1}{2}$ per Cents., guaranteed against reduction for a term of years, such term must have extended at the least to 25 years, else the guarantee would have been of no value to the lenders. It is moreover to be remembered that such must have been the boon in addition to the entirely reserved chance, that at the end of the term no reduction whatsoever can take place, a matter infinitely probable as will presently be shown.

If any one should say, as is in fact asserted in these Resolutions, that the dealers in the money market would have consented to accept a guarantee for only 15 years, without any reserved chance at all of a continuance of the extra 10s. of interest, the answer is quite obvious. The dealers bought and sold on a contrary persuasion. Now, their opinion is every thing to the success of a Loan; that of an individual, even if it were oracular, absolutely nothing, for he cannot enforce the lenders to believe him.

Neither is there any day in the year on which the public opinion, as to the time for which the $3\frac{1}{2}$ per Cents. are likely to continue, may not be reduced to a definite term of years; and your Lordships will not disdain to view with curiosity how it comes to pass that the united working of the minds of a multitude of men, each one intent on his own individual interests, should nevertheless, settle down into an arithmetical problem capable of easy and exact solution.* But so it is with the question under consideration, for the current market price is nothing else but the result of all their thinking.

The rate of interest yielded by the 3 per Cents. is always a known quantity. The excess of the 33 per Cents. above the other is the price of the annuity, and is likewise always known. From those two known quantities it is easy to determine the time during which the parties who purchase the annuity reckon on retaining it, and this is to be done under all possible circumstances; for if the 3 per Cents. were at par or higher, the other Stock would be at least 30 s. beyond it; that is to say, three years' purchase of the annuity; and this, on account of some bonus expected at the reduction, or that something in the chapter of accidents may still turn up to defeat the minister's hopes of reducing them.

I beg leave to annex an account, supplied officially by the Government brokers, of the price of the British and Foreign Funds on each of the 24 quarter days preceding the loan, together with an arithmetical statement (Problem IV.) of the mean rate of interest which the respective securities afforded in the whole time. This mean is not the arithmetical mean commonly called the average, but the geometrical mean deduced from the logarithms. From this it appears that the price of the British 31 per Cents. and 3 per Cents.

respectively gave the same results as the following uniform price; viz.:

The 3 ½ per Cents - The 3 per Cents -	-	-	94·498570 86·638598	-	nearly "	-	z. 94 86	s, 9 12	a. 11 $\frac{3}{4}$ 9 $\frac{1}{4}$
The difference is	•	-	7.859972	-	,,	-	7	17	2 1/2

The double of which, or the value of 1 l. per annum, is 15719944 or 15 l. 14 s. 5 d. And the rate of interest in the 3 per Cents. being 34,6261. 12s. per million, or 31. 9s. 3d. per 100 l., it follows inevitably that the term for which the extra 10s. of interest was expected to continue was, as near as may be, 23 years, and that it was paid for accordingly.

The same document shows that the mean rate of interest yielded by the Long Annuity, for the six years preceding the Loan, was 36,340 l. 2s. 5d. per million, or 3l. 12s. 84 d. per cent.

If the conditions of the late Loan had been, that the contractor should receive no benefit whatsoever in the shape of bonus for expense, risk, anxiety or profit, but simply that he should advance the self same sum of money for 3 per Cent. Stock and Long Annuity, at the mean rate of interest yielded by those securities respectively, in the six years of profound peace which had just elapsed, it will appear that the result would, by a small shade, have been more favourable to him than the rate of interest which he did receive in fact.

And

And your Lordships cannot fail to observe that this is a most remarkable circumstance, perhaps unprecedented in the annals of mankind. It leaves all chance of profit dependent on the mere contingency of better times in future; and we may therefore conclude that no Loan has ever taken place heretofore that will bear any comparison with the beneficial terms of the late Loan.

It is shown in the arithmetical note (Problem II.) that of tractor as capital	the wh f 508,,	tole su £ 178 <i>1</i> . -	im p 14	aid by th 621.311 681,539	ie co _)n- —
The residue was paid in respect of 3 per Cent. Stock	-	- £	. 12,	939,772	_	
Now, if these capitals had been lent at the mean rate of in nuity and 3 per Cents, respectively, during the last six years	terest , the r	yielde esult i	d by s as	y the Lon follows, y	ıg A viz:-	.n-
1,681,539 l. at 36,340 l. 2s. 5d. per million, is per annum 12,939,772 l. at 34,624 l. 12s	-	-	£.	61,107 448,060	2 6	6 6
Total perpetual charge at these the mean rates of interest Whereas by the Loan as actually effected it was - $-$	-	-	_	509,167 508,478	9	
The difference is -	-	-	£.	689	9	_

which is equal to 22,982 l. in 3 per Cents. in favour of the Loan as contracted.

Since, therefore, the Loan was effected in 3 per Cent. Stock and Long Annuity, on terms so near the mean rate of interest in the previous six years, as to be nearly identical, we have a right to infer that if it had been raised wholly in the $3\frac{1}{2}$ per Cent. Stock, the lenders would in like manner have insisted on the mean rate of interest yielded by the latter during the same time at least.

That rate of interest was 37,037 l. 12s. per million, or nearly 3l. 14s. 1d. per Cent., the price of one million of Stock ex-dividend being - - - f. 944,985 14 - And this is not far from the nett price resulting from the assumption

on which the resolutions are founded, which, as already shown (page 10), was for a million of Stock - - - - - 948,005 6

The difference in the money value being only - - f. 3,019 12 7

Then 14,621,311 l. 8 s. being the money really advanced as capital, the interest of this at 37,037 l. 12 s. per million is per annum - - f. 541,538 5 8Representing a capital in $3\frac{1}{2}$ per Cents. of 15,472,522 l. to be secured from reduction for 25 years, else the guarantee is of no value.

Whenever afterwards this can be reduced to 3 per Cent Stock, the dividends thereof will still be - - - - - - - - - - 464,175 13 5

The saving looked	l forward to being a	perpetual annuity of	£	5. 77,362	12 2
The saving looked		· · · · · · · · · · · · · · · · · · ·		11/0	

By the Loan as effected we have a yearly charge continuing certainly fo the term of the Long Annuity of	r 24¾ years, £. 551,875 541,538	, beir — 5	ng
So that by the Loan as effected there is an excess of yearly charge of with a certain yearly saving after 24 ² / ₄ years of	10,336 101,875 450,000	14 - -	4
is, in any event, at least	464,175	13	5

Being after 25 years a perpetual yearly excess of - - - - £. 14,175 13

even if it were quite certain that the 31 per Cents. will then admit of reduction.

The question is, which is the greatest loss, 10,336 l. 14 s. 4 d. per annum for the first 242 years, or 14,175 l. 13 s. 5 d. per annum, commencing at the end of 25 years, and continuing payable in perpetuity afterwards.

The contemplated reduction of the $3\frac{1}{2}$ per Cents. implies the rising of the 3 per Cents. beyond par: we must therefore assume the latter to average some intermediate price during the currency of the first 25 years; for instance, 93l. 15s. which gives the rate of interest at 3l. 4s. per 100 l.

While the loss of the temporary annuity of 10,336 l. 14s. 4 d. is - 175,797 16 3

And the first loss is the greatest by	-	-	- £.	24,514 14	6
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5

7

The first loss would also be the greatest if the rate of interest adopted for the valuation were the mean rate yielded by the 3 per Cents. in the last six years as above, viz., 3l. 9s. 3d. per cent.

Thus it appears, that by the method in which the Loan was effected, there is a small saving as compared with borrowing in a $3\frac{1}{2}$ per Cent. Stock, even if it were an absolute certainty that the latter could be reduced to 3 per Cents. in 25 years.

But, my Lords, there is no certainty of such an event. The $3\frac{1}{2}$ per Cents. may, for aught that any man can prove to the contrary, continue for a century unreduced. But for whatsoever term they may so continue, be it more or be it less, the loss by borrowing in that description of security as compared with the plan really adopted, would be a yearly charge of 77,362l. 12 s. 3d. as has just been shown.

of 77,3621.12s.3d. as has just been shown. Your Lordships will now perceive that the general proposition as to whether it might have been more expedient to have borrowed the late Loan in the 3½ per Cents. rather than in the lower Stock, as was effected, is answered in the negative, unless those who would still maintain the contrary opinion are able to prove that the shrewd and cautious dealers in the money market are altogether mistaken in buying and selling on the persuasion that the higher Stock will continue unreduced, at all events until the year 1860, and thereafter as matters may chance.

This question is also worthy of examination, for it involves an opinion as to the probable mean rate of interest during the next half century, which is a point of importance at the present moment when it must enter deeply into other questions of magnitude which are about to occupy public attention.

In a recent very valuable work, Mr. Maccullock's "Dictionary of Commerce," it is erroneously imputed to me, that when giving evidence, many years ago, before a Committee of the House of Commons, I had maintained that the probable mean rate in future would be $4\frac{1}{2}$ per cent., which opinion is very properly controverted. But I never said so. An account had been taken by me from the purchases made by the Government brokers, of the prices of 3 per Cent Consols and Reduced, on each quarter day for a period of 40 years subsequent to the reconstruction of the Sinking Fund in 1786. The geometrical mean of the rate of interest over those 40 years was identically $4\frac{1}{2}$ per cent. It was not my opinion that this would continue to be the mean rate for the 50 years then ensuing, but that such mean would probably be 4 per cent.; thus allowing a depression of one-half per cent. for the gradual accumulation of capital, and disbelieving entirely that the periods of peace and war in future would vary their accustomed relations to each other, but that they would still be, as for centuries they have been, precisely equal, each subsequent peace being in exact proportion to its antecedent war. In this opinion, after 10 years' further observation, I have found nothing to change or to modify; and many more reasons could be adduced in support of it than can with propriety be set forth on the present occasion.

The annexed document (Problem IV.) shows, for the six years preceding the late Loan, what was the mean rate of interest in the public securities of the principal powers of Europe, except Austria, in respect of which this information was not at hand, and except Holland, which was omitted from her peculiar circumstances. The rate was—

				Per Million.		Per Hundred.
				£. s.	d.	f. s. d.
In the French 3 per Cents	-	-	-	41,846 8	5	4 3 81
In the French 5 per Cents	-	-	-	50,737 13	7	5 1 54
In the Russian 5 per Cents	-	-	-	49,970 13	2	4 19 11
In the Prussian 5 per Cents. which y last year -	were	paid of -	ff}	49,794 16		4 19 7
Mean of the 5 per Cents. in the three n	ation	IS	-	50,167`13	7	5 - 4

It is evident that this high rate of interest does not arise from distrust of the public faith of any one of those enlightened and powerful nations, but partly, perhaps, from some doubt of their resources; chiefly, beyond all question, from the demand for capital in the internal commerce of the respective countries themselves. This is apparent, first, from there being very little difference in the rate of interest yielded by the 5 per Cents. in any of them; and secondly, because the Prussian securities, though actually paid off, gave nevertheless the same rate of interest, very nearly, as the average.

Inasmuch, then, as the French 3 per Cents yielded per million	-	£. 41,846	8	
While the British $3\frac{1}{2}$ per Cents. at the same time yielded -	-	37,037 1	2	-
Being a higher rate in the French 3 per Cents. of - or a difference of 9s. 7d. per 100l.	-	4,808 1	6	-
And inasmuch as the foreign 5 per Cents., on a medium, gave - Being an excess over the British 3 ¹ / ₂ per Cents. of	-	£.50,167. 1 13,130	3	7 7
or $1l. 6s. 3d.$ per $100l.$;				•

It is but reasonable to conclude that a long time must elapse before capital shall have settled itself into such a state of equilibrium over Europe, as that the rate of interest on the Continent will not materially exceed the rate realized in England. If so, what would be the effect of attempting to reduce from $3\frac{1}{2}$ to 3 per Cent. Stock our present debt in the former, which is a capital of 247 millions? Most certainly this, that so large a proportion of the stockholders would dissent, in the certainty of better terms, with tolerable security, abroad, that money could not be found to pay them; and thus the attempt would be instantly frustrated.

On the other hand, every step in advance towards the state of equilibrium referred to, implies, along with the equalization of interest throughout Europe, its inseparable concomitant, the equalization of national credit. In such times, when they arrive in their fulness, which is nothing else than the advent of the Millenium, there will be no preference in the investment of capital for one country more than another, and consequently no reduction of interest that is not universal. In the meantime, it would seem that the stockholders in England are not far wrong in believing that such a state of things will not come to pass for

25 years, possibly not even then. The Table in the Appendix, showing the mean rate of interest in each of the public securities, is limited to a very short period of time. It is to be hoped that on some future occasion the observation may be extended to a period of 50 years or more, commencing with the peace of 1783. Such a view of the action of the Funds in times of war and peace, and of their relation to each other under all circumstances, would, as I hope to show your Lordships, be full of instruction. It would show, on a large scale, that there are peculiar properties in the several kinds of public securities of which, on the recent occasion, the Minister availed himself for the public interest with consummate ability; and in recording this fact, merely for the benefit of those who may in future succeed to his high office, I beseech your Lordships to believe me incapable of the meanness of eulogizing my official superior from any sordid motive.

ist. The Stock of which the dividends are payable in January and July sells at a higher price than Stock of the same denomination which is payable in April and October. Purchasers are content with lower interest for their money when invested in Consols and New 31 per Cents. than they would be if invested in 3 per Cents. Reduced and in 31 per Cents. Reduced. Acting on this well-known predilection, the late Loan was so effected as that very nearly two-thirds of the capital borrowed was raised in respect of Consols, it being unwise to raise the whole in that Stock for other obvious reasons.

In the arithmetical note, Problem IV., it appears that the mean rate of interest, ex dividend, was-

	3 per Cents. Reduced.	3 ^I per Cents. Reduced.
In respect of the April and October Stock, per million	£.34,913 – – 34,340 1 2	£.37,345 11 7 36,729 11 2
Difference	£.572 18 10	£.616 - 5

The dealers in the money market are so well aware of this fact, that they purchase Consols and New $3\frac{1}{2}$ per Cents., in May and November, for no other reason than to sell them again at the anticipated advance in July and January following; and no doubt this circumstance was well known to the contractor, and influential when the Loan was effected on the 3d of August.

Knowing the fact, but being in some uncertainty as to the cause of this curious property of the January and July Stock, I applied to one of the very first dealers in the market for information, who answered as follows :-

"The Funds are generally higher in the months of January and July than at any other period of the year. I know several dealers who regularly purchase in May and November, with a view to a re-sale in July and January."

With respect to the cause, he says-

"1st. The 3 per Cent. Consols are the speculators' Stock, and are more easy of sale in consequence. I could sell a million of 3 per Cent. Consols in less time, and at a fairer price, than five hundred thousand Reduced. Speculators will buy the one, while with the other I must either find investors [i. e. bonâ fide purchasers with money, not speculators for time,] or sell them to jobbers, who would be compelled to sell Consols against them till they could place them.

"2d. The amount of capital in 3 per Cent. Consols and New $3\frac{1}{2}$ per Cents is much larger than that in Reduced and Reduced $3\frac{1}{2}$ per Cents., therefore the re-investment of dividends upon trust accounts, of insurance companies, &c. &c., are all much more considerable." [This is certainly true. The dividends of all sorts in the April and October quarters are now 4,712,391*l*. Those in the January and July quarters, 8,899,922*l*.] "3d. I have always considered the meeting of Parliament unfavourable to the rise of the Funds." And he instances the many questions of deep moment which arise to agitate

men's minds, and excite their fears during the Session.

But in addition to those causes, I am humbly of opinion that the greater abundance of money in July and January than at April and October must have something to do with the effect in question; for it would seem that rents and other profits are more generally paid and realized at the former than at the latter quarters, and therefore that the competition for investing the savings of income must be greater.

2dly. Another peculiarity in the public securities, which is perhaps not generally known, is a remarkable property of the Long Annuity. It is more susceptible of violent fluctuation When Stocks are high, the Long Annuity rises higher than than any of the other Funds. any of them. The judgment of the Minister was therefore manifested in taking advantage of this property on the 3d of August last, by requiring that the bidding should be in Long Annuity. That the contractor was contented with the portion thereof which he finally accepted although 10,000 l. per annum less than his first demand, is a proof also of his intelligent 597. '

intelligent mind, for he certainly knew that with a rising market the annuity could be profitably disposed of.

But when Stocks are low, the case is the reverse: Long Annuity always was and will for ever be lower than any of the rest. Hence the ruinous policy of borrowing in Long Annuity and forcing that security on the market in time of war; a practice too often resorted to at former periods.

If the price of Stock should continue much the same as at present until October 1840, the Long Annuity will then, when it will have only $19\frac{1}{2}$ years to run, be nevertheless saleable at $14\frac{1}{2}$ years' purchase. Now, my Lords, it is matter of record that in October 1803 the Long Annuity actually sold for only $14\frac{1}{2}$ years' purchase when it had $56\frac{1}{2}$ years to run; so that notwithstanding an ebb of full 37 years, there is no difference in the price. It sells at this moment at $16\frac{1}{2}$ years' purchase. The reason is obvious. In time of peace, when the rate of interest is very low, income, not capital, is in request, and to many persons indispensable. In time of war, on the contrary, capital being in the utmost demand, the high rate of interest presents a great temptation to acquire a perpetual rather than a temporary income. When Long Annuity is at $14\frac{1}{2}$ years' purchase, an income of 7*l*. 1s. 7*d*., which is only temporary, is obtained for 100*l*. money. In 1803 the 3 per Cents. were as low as 50, which is an income of 6*l*. in perpetuity for 100*l*. money. The perpetual income is therefore $\frac{2}{3}$ th parts of the temporary. But in 1840, Long Annuity being at the same price, the perpetual annuity will only be 3l. 4s. for 100*l* in money, which is much less than half of the temporary income. This is an irresistible temptation to those who speculate on a reconstruction of their capital at any subsequent fall of prices, and to those also (and they are numerous) who cannot reduce their expense of living along with the reduction of interest.

3dly. There is further a third peculiarity in the public securities, which bears very much upon the present question. Both in France and in England the higher Stock, such as the 5 per Cents. in the former, and the $3\frac{1}{2}$ per Cents. in the latter, are less subject to fluctuation than the 3 per Cents. The rate of interest in the higher Stock neither rises nor falls so much relatively as in the lower; and this is an excellent reason for borrowing in the higher securities in time of war, and for carefully avoiding them in time of peace. The reason is plain. I have shown that the price of $3\frac{1}{2}$ per Cent. Stock is a compound quantity, consisting of the value of a perpetual annuity of 3l. and of a temporary annuity of 10s. continuing payable for an indefinite term of years. When Stocks fall, the temporary annuity relatively increases in value by reason of the probability of its long continuance. When Stocks rise very high, the temporary annuity falls in value, from the apprehension that it is about to terminate, and then the prices of 3 and $3\frac{1}{2}$ per Cents. approximate. In either event the temporary annuity is a counteracting force which tends to allay fluctuation. To demonstrate the truth of this theory in practice, it would be desirable to extend the observation, as already mentioned, over a period of 50 years. In the meantime the table of fluctuation in the Appendix confirms the doctrine as far as it goes. This table, it may be remarked, also shows that it was not the revolution in France, nor the agitation of the Reform Bill in England, which lowered the funds in either country, but the unsettled state of Belgium, which in both created the apprehension of a general war.

But the three peculiarities enumerated may be illustrated by the following short Table:

In the following Public	The Average of the Two highest	And the Average of the	The Difference is therefore as	As compared with the mean rate of interest in each of those Public Securities.			
Securities.	Rates of Interest was	is	under .	The 1st column is in Excess.	The 2d column is Deficient.		
Long Annuity 3 per Cent Reduced 3 per Cent. Reduced 3 per Cent. Consols New 3 ¹ / ₂ per Cents. French 3 per Cents. French 5 per Cents.	 £. 42,471 38,372 40,469 36,945 38,971 51,007 59,766	$\begin{array}{c} \pounds. & s. \\ 31,854 & - \\ 33,072 & - \\ 35,467 & - \\ 32,591 & - \\ 35,026 & - \\ 37,744 & - \\ 47,005 & 10 \end{array}$	$\begin{array}{c} \pounds. & s. \\ 10,617 & - \\ 5,300 & - \\ 5,002 & - \\ 4,354 & - \\ 3,945 & - \\ 13,263 & - \\ 12,760 & 10 \end{array}$	$\begin{array}{c} \pounds. & s. \\ 5,834 & - \\ 3,459 & - \\ 3,123 & 8 \\ 2,605 & - \\ 2,241 & 10 \\ 9,160 & 12 \\ 9,028 & 6 \end{array}$	f. s. 4,783 - 1,841 1,878 12 1,749 - 1,703 10 4,102 8 3,732 4		

Taking the interest of a million as the basis, we observe in Problem IV. that during the Six Years therein mentioned :

Finally, that the creation of a high Stock in time of peace, without entailing a heavy public loss, is a thing impracticable, there is the evidence of recent experience. Six years ago the New 4 per Cents. of that day were reduced to the present New $3\frac{1}{2}$ per Cents. On that occasion it was the opinion of more than one eminent authority in finance that a 5 per Cent. Stock might be created, guaranteed against reduction for 50 years, but with a diminished capital. The stockholders were to have the option of accepting the latter, or of contenting themselves with an equal capital in $3\frac{1}{2}$ per Cent. Stock. But not one three-hundredth part of the capital to be reduced was so changed into 5 per Cents. The proportion who took $3\frac{1}{2}$ per Cents. were as 21,000 to 88. Witness the fact in the Finance Accounts of this year, in which

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My Lords, there is one point yet to be noticed of the subject matter of these Resolutions, but which cannot be entertained without supposing, however improbable, that the time will at last come when the $3\frac{1}{2}$ per Cents. may really be reduced. In this case all our National Debt, which is now a capital of some 760 millions, will be 3 per Cent. Stock and nothing else. Now, it is made a serious charge against the Minister, not true, however, as it chances, but it is nevertheless a subject of blame in the 11th Resolution, that by the late Loan "besides the loss to the public of 1,038,341 l. 12s. arising from the difference of charge for the Annuity, there will be an additional loss to the public of 1,570,563 l. by the increase of capital of the National Debt." The question here is not as if an individual who already owed a debt of 760 l. were to be censured for incurring a further debt of one guinea and a half, which is precisely the proportion of the National Debt to this its alleged increase. But the loss of capital referred to (interest being expressly excluded as a separate consideration already commented on), can only be sustained when the whole 760 millions of 3 per Cent. Stock shall be absolutely paid off as capital with the like amount of money. The "public" who are to suffer this loss will consequently be a future race of men who are hereafter to appear in some age very remote from the present.

To every man capable of reasoning, it must be matter of astonishment how any one can imagine it to be of the slightest importance whether "the capital of the National Debt" is increased or no, so long as its interest remains the same. My Lords, if the holders of the 3 per Cents. were with one voice to abate only 5 per cent. from their yearly dividends, he who had 10,000 *l*. Stock, giving an income of 300 *l*. agreeing henceforward to accept 285 *l*. a year, there is not the least doubt that, in return for such a concession, it would be a cheap bargain, without a moment's delay, to decuple the whole capital, and declare the stockholder in question to be the owner of 100,000 *l*.; not in the 3 per Cents. certainly, but in what then would be the 5s. $8 \frac{1}{2} d$. per cents. Nay, if the stockholder would but still abate a very little more, even 1 per cent., it would be the soundest policy to declare his capital infinite, by rendering the reduced income at once a perpetual annuity, absolutely irredeemable unless at the owner's mere pleasure.

Neither would such a measure present the slightest obstacle to the gradual extinction of the National Debt.

For is not land an infinite capital, in this sense, the interest of which is called rent? Yet it is every day bought and sold at prices regulated by the market rate of interest at the time being. True it is that the rent of land sometimes, not always, brings a higher price than other incomes of the like extent. In that case, however, the *excess* of price is not paid as capital put out to interest, but is a sum of money given for valuable considerations of quite another kind.

In the instance assumed for illustration, if the stockholder with his 100,000 l. capital, producing a dividend of 285 l. a year, were desirous of being transformed into a freeholder with a rent of 282 l., it is most likely that, finding himself straitened for want of income, he would in a short time be accessible to an offer of 330 l. a year for 65 years certain, and thus be once more transformed into a leaseholder, whose capital will have vanished at the end of his term.

To apply this to the whole debt of 760 millions it is only necessary to say, that while it may exist in the form of 3 per Cent. Stock, its yearly dividends will be - £. 22,800,000

When it took the form of an infinite capital, the perpetual rent as above

would be –

21,432,000

would be 25,080,000 The fallacy in the Resolution consists in taking it for granted that there are no means of getting rid of a debt but by restoring the capital, as if a man could not disencumber his estate from a mortgage by giving up, on a long lease, to the creditor, a farm producing considerably more income than the interest of the debt, and leaving the creditor alone to reconstruct his capital at leisure from the overplus, or to consume it by spending the whole.

Thus, my Lords, in the very dry science of arithmetic, declamation is not wanting. Empty sounds may be conjured up as shadows to work on men's fears, even in quarters too high for me to allude to. That the late Loan has in all respects been effected on precisely the conditions which the soundest judgment would have prescribed, has been, I fear at too great length, proved to your Lordships by nothing short of demonstration.

Those conditions moreover, it is proper to explain, were, to the best of my knowledge and belief, the sole result of the Minister's individual deliberations, unaided by any technical councils or calculations whatsoever.

Lastly, in concluding this Report, I would most humbly crave permission to express admiration of the high-spirited contractor who courageously undertook the Loan, and in a few weeks fulfilled his contract, on terms the very lowest that were consistent with his own safety. Better qualified perhaps than any living man to appreciate the value of public credit, that eminent person has, on this occasion, given England the full benefit of her inestimable pre-eminence among nations, in the great attributes of unshaken fidelity to her engagements, of unimpaired, increasing and all but unlimited resources.

All which is nevertheless most humbly submitted to your Lordships' superior wisdom.

John Finlaison,

Actuary of the National Debt, and Government Calculator.

National Debt Office, 7th March 1836. 597.

APPENDIX.

(A.)

ARITHMETICAL NOTE referred to in the REPORT.

PROBLEM I .- To determine the limits within which the minister was confined in negotiating the Loan contracted for on 3d August 1835.

Those limits are dependent on the rate of interest yielded by Consols, Reduced and Long Annuity respectively, on 24th July last, as explained in the first part of the Report.

The official return from the Bank gives the average price of Consols on that day at 90 l. 7 s. 6 d.; of

The omenal letter from the Dank gives the average price of Consols on that day at 90 l. 7 s. 6 d.; of Three per Cents. Reduced at 91 l., and of the Long Annuity at 16 l. 18 s. 9 d. The Three per Cents. Reduced and Long Annuity have their dividends payable on 5th April and 10th October, in which half year there are 188 days. Of these, 78 days were unexpired on 24th July; 68 days on 3d August; and 110 days' interest had accrued on the first date, and 120 days' interest at the latter the latter.

The dividends on Three per Cent. Consols being payable on 5th July and 5th January, in which half year there are 184 days, 19 of those days had expired on 24th July, 29 days on 3d August; so that 165 days were unexpired at the former date, and 155 days at the latter.

Then the dividends which had accrued, but which were not yet payable on those respective dates, on each kind of Stock, are as under :---

On 24th July. On 3d August.
3 per Cents. Reduced
$$\left(\frac{110}{188} \times 1.5\right) = .8776600$$
; and $\left(\frac{120}{188} \times 1.5\right) = .957447$.
3 per Cent. Consols $\left(\frac{19}{184} \times 1.5\right) = .1548913$; and $\left(\frac{29}{184} \times 1.5\right) = .236413$.

The rate of interest being evidently very near 3 l. 6 s. per cent. The dividends at the first date are to be discounted at this rate.

Whence we have
$$\left(\frac{110}{188} \times 1.5\right)$$

 $\left(1. + \frac{78}{188} \times 0.065\right)$ = $\frac{.87766}{1.006846}$ = $\cdot 871692$ = The value of the dividend due on the Reduced on 25 July.

$$\frac{\text{And}}{\left(\frac{19}{184} \times \frac{12}{100}\right)} = \frac{1548913}{10147962} = 152633 = \text{The value of the dividend on Consols.}$$

And the market prices being Deducting the value of the accrued dividends		-	- £. 91.0000 		£.90.375 - 152633
It follows that the price, clear of dividend Whence it results that the rate of interest The Act allows this rate to be increased by 5 s. pe	- er 100 <i>l</i> .	- viz.	$= 90^{\circ}128308$ = 00332859 0025	- a:	-90.222367 nd = 0332512 -0025
Therefore the increased rate of interest is - And 1001 Stock clear of dividends, is worth -	-	-	- •0357859 £.83•8319	- ar - and	ıd •0357512 1 £. 83.913275

The value of the dividends, which would have accrued on 3d August, is next to be found at this new and increased rate of interest.

From this we have $\left(\frac{120}{188} \times 1.5\right)$	<u>- '957447</u> = '9513897 =	The value on 3d of August
$\left(1+\frac{68}{188}\times .01789295\right)$	1.00647192	of the dividends on 3 per Cents. Reduced.
/ 00 \		

And $\left(\frac{29}{184} \times 1.5\right)$	•236413	 = The value on 3d August of the dividend wh	lich
$\overline{\left(1+\frac{155}{184}\times \cdot 0178756\right)}$	1·015058 3	 had accrued on the 3 per Cent. Consols.	

And whereas at the increased rate of interest, the price, clear of dividends, was already shown to have been: In Concole

In 3 For 100 l. Stock Adding thereto the above values of the accrued dividends, viz.	per Ce £. 83	.8319000 9513897		- £. 83.913275 - 2329063
The market price on 3d of August would therefore be	£. 84	•7832897	- -	- £.84.1461813
Whence the value of 75 l. in 3 per Cent. Consols is and ,, 25 l. in 3 per Cents. Reduced -	-		£. (53·1096360 21·195822 4
Both - Inasmuch as for each 100 L of the Loan there was to be pair	d down		£. 8	34·3054584 98·0125
The difference is disposable for Long Annuity, viz	•	or	£.	13.7070416 13. 14. 1 2 nearly. The

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The question is, what portion of the Long Annuity this last sum is worth, when the rate of interest resulting from the market price of that public security on 24th July, is in like manner increased by 5.8. per cent.; for if the contractor had demanded so much Long Annuity, the claim might have been legally allowed.

The Long Annuity is payable in April and October, until the last half-yearly payment thereof in October 1859, after which there is one quarter more to be paid in January 1860. Its price on 24th July was, as already mentioned, 161. 18 s. 9 d.

Let V signify the value of an income of 11. in this annuity on 6th April, after the payment due at that date had taken place.

Let r signify the rate of interest for money which was realized by dealings in the Long Annuity.

Then V =
$$\left[1 + \left(\frac{1+\frac{r}{2}}{2}\right)^{\frac{1}{49}} \times \left(1+\frac{r}{4}\right)\right]$$
 and V $\left[1 + \frac{110}{188} \times \frac{r}{2}\right] = 16.9375$

From this expression r is to be extricated, which is impossible by any direct method.

But if r be assumed at 033276, it will be found that V = 16.77407 and $V \left[1 + \frac{110}{188} \times \frac{r}{2} \right]$ = V \times 1.0097377 = 16.93741 which is very near 16.9375 the difference being only 9 *l*. in the value of a Long Annuity of 100,000 l.

It is certain, then, that the rate of interest yielded by Long Annuity on 24th July 1835, was exceedingly near ---- - £. 33,276 per Million And when this is increased by 5s. per 100l.

					=,000	•
					and the second se	
The augmented rate becomes	•	-	-	-	£. 35, 7 76	,

At which latter rate the value of an annuity of 1*l*. after 6th April becomes 16.330763; and its enhanced value on 3d August being now $V\left[1 + \frac{120}{188} \times .017838\right] = 16.330763 \times 1.01141713 = 16.5172;$

Then since 13 7070416 *l*. was the money disposable for the purchase of Long Annuity, and since, at the increased rate of interest allowed by law, the market price of Long Annuity would become 16.5172 years' purchase, it follows, by proportion, that the money disposable was equal in value to .8298647 *l.* in the Long Annuity, which is very nearly sisteen shillings and seven-pence one farthing; and if any contractor had required this much Long Annuity, together with 75 *l.* in Consols, and 25 *l.* in 3 per Cents. Reduced, in return for 98 *l.* os. 3 *d.* in ready money, the demand could have legally been acceded to, but only thus far.

PROBLEM II. The Loan being taken on the condition that 75 l. in Consols, 25 l. in Reduced, with thirteen shillings and seven-pence in Long Annuity should be allowed for 98 l. os. 3 d. in ready money; required the rate of interest for capital afforded by those terms, it having further been stipulated that the above given portions in each of those public securities should carry with it the dividend or interest which had accrued upon it on the 3d of August.

Let r signify this rate of interest. Let p denote that portion of 981. os. 3d. which is pure capital divested of the value of the dividends which had accrued on 3d August.

- Let x denote that portion of 98 l. os. 3 d. which is the value of the dividend that had accrued on 13s. 7 d. in the Long Anunity on 3d August.
- y the same in respect of the 25*l* in 3 per Cents. Reduced. z the same in respect of 75*l* in 3 per Cent. Consols. So that p + (x + y + z) = 98.0125l.

Let V denote the value of 1 L in Long Annuity as before, so that $\frac{163}{240}$ V = the value of 13 s. 7 d. of the same.

Then
$$\frac{153}{240}$$
 V + $\frac{75}{r}$ + $\frac{2^{\circ}25}{r}$ = p. And $\frac{163}{240}$ V r = pr - 3.
 $z = \frac{163}{240}$ V $\left[1 + \frac{120}{188} \times \frac{r}{2}\right] - \frac{163}{240}$ V
 $y = ^{\circ}25 \left[\frac{3}{r} + \left(\frac{120}{188} \times ^{\circ}1^{\circ}5\right)\right] - \frac{75}{r}$ and $V = \left\{1 - \frac{1}{\left(1 + \frac{r}{2}\right)^{49} \times \left(1 + \frac{r}{4}\right)}{r}\right\}$
 $z = ^{\circ}75 \left[\frac{3}{r} + \left(\frac{29}{184} \times ^{1\circ}5\right)\right] - \frac{2^{\circ}25}{r}$

As r is a quantity common to each one of the above expressions it will be found that no other value of r whatsoever will comply with the conditions of this Problem practically, except when r = 0.0347765, at which rate V = 16.50590284 and $\frac{3}{r}$ = 86.2651503 = the value of 100 l. Stock in 3 per Cents.

Nett Price clear of the Dividends.	Value of the accrued Dividends.	Total or Market Price.			Interest in Perpetuity on each portion of Nett Capital.
$\frac{163}{240}$ V = 11.2102590 and x	= ·1244213 . · .	$\Sigma = 11.3346803$	nearly £.11	6	81 - 3898536
$\frac{.75}{r}$ = 21.5662876 and y	= •2378660	$\Sigma = 21.8041536$	21	16	1 .75
$\frac{2 \cdot 25}{r} = 64 \cdot 6988627$ and z	= 1747502	$\Sigma = 64.8736129$	- 64	17	53 - 2.25
Total = p = 97.4754093 (x + y)	+z) •5370375 To	otal - 98.0124468	- £.98	-	3 £. 3 3898536
and $\frac{103}{240}$ V × r = (pr3) =	.3898536.				

Whence it results that the total sum payable by the Contractor, viz. 14,701,875 l., when distributed in respect of the various securities which he paid for, stands thus :---

	Value including th accrued on Day of	e Di of Co	vidends ntract.	Value of the which had s	Divi o acc	idends rued.	Nett Capital Clear of the Dividends.	nds. Interest of eac in Perpet		ortion	
£.101,875 in Long Annuity £.3,750,000 3 per Cent. Reduced - £.11,250,000 3 per Cent. Consols -		£. 1,700,202 3,270,623 9,731,041	s. - 18	d. 11 10 9	£. 18,663 35,679 26,212	s. 3 18 10	d. 11 - 8	£. s. d. 1,681,538 17 - 3,234,943 2 10 9,704,829 8 1	£, 58,478 112,500 337,500	8. - -	d. 9 -
TOTAL Amount of error, which add	-	14,701,867 7	19	6 6	80,555 7	12 19	7 6	14,621,311 7 11	508,478	-	9
ł	E.	14,701,875	_	_	80,563	12	1				

Thus it appears that the rate of interest discovered is so near the truth that on the whole capital the error is only 7 l. 19 s. 6 d. It also appears that the effect of the whole is the same as a permanent annuity added to the National Debt of 508,478 l. os. 9 d., which is equal to the dividends of a capital in 3 per Cent. Stock of 16,949,268 l., but not to a capital of 17,346,890 l. as asserted in the 4th Resolution, which refers to an advance of 15 millions of money, whereas the nett sum of money really advanced as capital is 14,621,311 l. 7 s. 14 d.

Thus it is demonstrated that the Loan was effected at a rate of interest equal to 34,776 l. 10 s. per

million; very near but not quite 3*l*. 9s. $6\frac{64}{100}d$.; say, 3*l*. 9s. $6\frac{1}{3}d$. per 100 *l*. The 1st and 2d Resolution, therefore, although certainly near the truth, are not absolutely correct as to the rate of interest either in the premises or conclusion.

They assert the price of 3 per Cer	nt. Co	onsols.	inclu	ding	divide	nd, to	be	-	£.	86	9	5
It was in reality nearly	-	- ′	-	• Ŭ	-	•	-	-	•	86	10	-
They assert that 3 per Cent. Red	uced '	was	-	-	-	-	•	-	-	87	4	5
When it was	-	-	-	-	-	-	-	•	-	87	4	4
They assert Long Annuity to be a	at the	e price	of	-	-	-	-	-	-	16	14	4
But strictly it was not -	-	•	•	-	-	-	•	•	~	16	13	9 \$
Lastly, that the rate of interest or	1 the	whole	was	-	-	<u>1</u>	-	-	-	3	9	4 1 0 0
Whereas it was actually	-	•	-	-	-	-	-	•	-	3	9	$6_{\frac{6}{100}}$
•												

PROBLEM III .- When, on 3d August, the New 31 per Cents. are at the market price of 97 l. for 100 l. Stock, and when this price is further reduced by discount in the ratio of 100% to 98% os. 3 d. to find the rate of interest for capital yielded by Stock at this reduced price.

The New 31 per Cents. are payable at the same times as the 3 per Cent. Consols ; viz. in January and July.

When 97 l. is reduced by discount, as above $(97. \times 980125 = 95.072125)$, the reduced price is 950,721 l. 5 s. for one million of Stock.

Let p signify the value of 100 l. Stock, clear of its accrued dividends on 3d August, and let w signify the value of such dividend on that day, so that $(p + w) = 95 \cdot 072125$. (29) No value of r will satisfy the conditions of this problem, except $\cdot 036919625$,

$w = \left(\frac{29}{184} \times 1.75\right)$	when it will be found that —
1.55	$w = \cdot 271591955$
$1 + \frac{155}{2} \times -$	p = 94.800533045
184 2	$n \times w = 05.072125000$

So that for one million of Stock, clear of dividend, the value is 948,005 l. 6 s. 7 d., and the rate of interest is 36,919 l. 12 s. 6 d. per million, or 3 l. 13 s. 10 d. per cent.

PROBLEM IV .- In the annexed account there is an authentic statement of the price of the British and certain of the foreign public securities on each of the 12 half-yearly market days next succeeding the payment of the dividends on those securities respectively, which had occurred in the six years preceding the Loans: Required the mean rate of interest realized on the whole, both in this and the several foreign countries, during those six years.

In regard to the Long Annuity, the rate must be extricated by indirect means, as in the former problems, on each half-yearly date. In respect of all the other securities, it is easy to find the logarithm of the amount of 1 l. at the end of half a year in each case. The sum of those logarithms is obviously the logarithm of the amount of 1 l. at the end of all the terms. When that sum is divided, therefore, by the number of half years included therein, the quotient is the logarithm of the amount of 1*l*. at the end of half a year at the mean rate of interest. Whence the rate itself.

In the following Table the terms or half years are ranged in the order of dates corresponding to the prices in the annexed account. In the New 31 per Cents, the first term is wanting, because that Stock was not created at January 1830. The deficiency is supplied however by observing the relation of this new Stock to the 3 per Cent. Consols for the four subsequent terms, and assuming that relation for the missing term.

In the Prussian 5 per Cents. the two last terms are wanting, these securities having been paid off. Their place is in like manner supplied by the mean relation of the first ten terms of the Prussian to the Russian

Russian and French 5 per Cents. respectively, which mean is then assumed for the two deficient terms. Let r = the rate as before $\left(1 + \frac{r}{2}\right)$ = the amount of 1 *l*. at the end of half a year.

	BRITISH FUNDS,										
		Pay	vable in the	Pay	able at Jan	uary and July.					
Time ye unexpire	t d.	Long Annu	ity.	3 per Cents. F	3 per Cents. Reduced. 31 per Cents. Reduced.			3 per Cent. C	consols.	New 3½ per	Cents.
Years.		Log. $\left(1+\frac{7}{2}\right)$	Rate per Million.	$\log\left(1+\frac{r}{2}\right)$	Rate per Million,	$\operatorname{Log.}\left(1+\frac{r}{2}\right)$	Rate per Million.	$Log. \left(1 + \frac{r}{2}\right)$	Rate per Million,	$\operatorname{Log.}\left(1+\frac{r}{2}\right)$	Rate per Million.
30 1	-	00676545	£. 31,400	0072788	£. 33,802	0076771	£. 35,668	0069029	£. 32,043	{ 0074705 assumed. }	£. 34,700
29 1 29 1 28 3	- - -	00762191 00913972	31,884 31,411 42,536	0070332 0074772 0083254	32,654 34,732 38,710	0075626 0078964 0086514	35,132 36,696 40,240	0070049 0079811 0079205	32,520 37,080 36,810	0074696 0083636 0083982	34,696 38,890 39,052
284 27 2 274	-	00911209 00886407 00867702	42,406 41,240 40,361	0081816 0077903 0077555	38,034 36,194 36,036	0087486 0083406 0082838	40,698 38,780 38,512	0078254 0077210 0074666	36,364 35,874 34,682	0083636 0082748 0079898	38,890 38,472 37,134
26 4 264 254	-	00811877 00783651 00739674	37,740 36,416 34,355	0074240 0074666 0071687	34,482 34,682 33,288	0080321 0079481 0079794	37,334 36,940 37,086	0073095 0072891 0070523	33,946 33,850 32,742	0078964 0077555 0076194	36,696 36,036 35,398
25	-	00715566	33,226	0071885	33,380	0076482	35,534	0071295	33,104	0076386	35,488
24 <u>8</u>	•	00704794	32,722	0071003	32,966	0076482	35,534	0071198	33,058	0076004	35,310
Hean -	-	0078837325		007515842		0964165 008034708		0887226 00739355		0948404 00790337	
late - 1	E.	36,637 9 7	- £.	34,913	- £.	87,345 11 7	- £.	34,340 1 2	- £.	36,729 11 2	- £.
Mean of the 3 $\frac{1}{2}$ per Cents 007969039. Mean Rate - $f. 34,626, 12. \frac{3}{2} = f. 86.638598.$ Mean Rate $f. 37,037. 12. \frac{3\cdot 5}{2} = 94.49857.$											
	Diminishing the Logarithm of the Long Annuity according to the mean of those Logarithmic Differences it becomes - 007820325										

В	R	Ŧ	т	т	s	н	F	TT	N	n	g	
-					•••		- T .	•		~	N7 -1	

£, 36,340. 2. 5.

FURFION FUNDS		F	0	R	Е	I	G	N	F	U	N	D	S
---------------	--	---	---	---	---	---	---	---	---	---	---	---	---

French 3 per Cent. Rentes, payable on 22d June and 22d December. French 5 per Cen payable 22d March and 22d		nt. Rentes, I September.	Prussian 5 per Ce payable 1st April and 1st	ent. Bonds, t October.	Russian 5 per Ce payable 1st March and 1st	Number of the Half Year in each					
Log. $\left(1+\frac{r}{2}\right)$ Rate per Million.	$\operatorname{Log.}\left(1+\frac{r}{2}\right)$	Rate per Million.	Log. $\left(1+\frac{r}{2}\right)$	Rate per Million.	$Log.\left(1+\frac{r}{2}\right)$	Rate per Million.	Series.				
£. 00768682 35,714 00824640 38,338 01128101 52,632 01059310 49,382 00940747 43,796 00920800 42,858 00827253 38,462 00846060 39,344 00827253 38,462	01003034 01010040 01099538 01320146 01237390 01116500 01116500 01059308 01051612 01019520 01019520 01003034	£. 46,728 47,060 51,282 61,728 57,804 52,084 52,084 49,382 49,020 47,506 47,506 46,728	01059308 01064501 01128100 0102330 01099538 01088514 01072387 01061898 01061898 01061898 01051613 assumed 01013192 assumed	£. 49,382 49,628 53,632 51,414 51,282 50,762 50,000 49,504 49,504 49,020 47,208	01083085 00993852 01036552 01216591 01189922 01105135 01088514 01046543 010446543 01044027 01026747 01034083 00996130	£. 50,506 46,296 48,310 56,818 55,556 51,546 50,762 48,780 48,662 47,846 48,194 46,404	1st. 2d. 3d. 4th. 5th. 6th. 7th. 8th. 9th. 10th. 11th. 12th.				
10791694	13056142		12816470		12861181						
008993078	010880118		010680392		010717651			Mean.			
41,846 8 5 £.	50,737 13 7	£.	49,794 16 -	£.	49,970 13 2			Rate.			
•	Mean of all the Fore	eign 5 per Ce	.nts	· - ·	0107593	87	-				
		Mean Ra	ite		- £.50,167.	13. 7.					

PROBLEM V.—To determine for what period of time the $3\frac{1}{2}$ per Cent. Stock will remain unreduced to 3 per Cents. according to the persuasion of the dealers in the money market on any given day. Let a denote at any time the market price of 100*l*. Stock in $3\frac{1}{2}$ per Cents. which is always a known quantity.

Let $\frac{3}{r}$ denote the value of 100 l. Stock in the 3 per Cents., which is also known, and the value of r is therefore easy to be found.

Then $a = \frac{3}{r} = \frac{1}{2}$ V, or the value of an annuity of 10 s. payable for the indefinite period during which the $3\frac{1}{2}$ per Cents. shall continue unreduced. Let n signify the number of years which the dealers judge to be the equivalent of this indefinite period.

Then since
$$V = \begin{pmatrix} 1 - \frac{1}{\left(1 + \frac{r}{2}\right)} & 2n \\ r \end{pmatrix}$$
; $1 - rV = \begin{pmatrix} \frac{1}{1 + \frac{r}{2}n} \end{pmatrix}$ Whence Log. $\begin{pmatrix} 1 + \frac{r}{2} \end{pmatrix} & 2n \\ \frac{1 + \frac{r}{2}}{r} \end{pmatrix}$ Then Log. $\begin{pmatrix} 1 + \frac{r}{2} \end{pmatrix} & 2n \\ \frac{1 + \frac{r}{2}}{r} \end{pmatrix} = 2n$
Log, $\frac{1 \times \frac{r}{2}}{r} = 2n$

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TABLE of the FLUCTUATION of the RATE of INTEREST throughout EUROPE, between September 1829, and August 1835. Supposing that in each one of the public Securities before mentioned, the number 100,000 shall represent the mean rate of

interest realized for the whole six years, then the numbers under mentioned will show the deviation from that mean rate at each of the quarter days.

	ļ	BRIT	ISH FUNDS.			FOREIGN	FUNDS.		
	Long Annuity.	per Cents. Reduced.	3 1 per Cents. Reduced.	3 per Cent. Consols.	New 31 per Cents	French 3 per Cents.	French 5 per Cents.	Prussian 5 per Cents.	Russian 5 per Cents,
1829: October 1830: January , April , July , October 1831: January , April , July , October 1832: January , April , July 1833: January , April , July 1833: January , April , July , April , April	85.705 87.026 85.735 116.367 115.745 112.562 110.163 103.009 99.395 93.770 90.689 89.313	96.818 93.530 99.482 110.876 108.940 103.669 103.217 98.765 99.338 95.346 95.609 94.423	95'508 94'073 98'261 107'750 108'979 103'841 103'123 99'969 98'914 99'311 95'149	93:311 94:700 107:979 107:193 105:894 104:467 100:996 98:853 98:568 95:347 96:401	94'474 94'463 105'882 106'323 105'882 104'744 101'101 99'909 98'112 96'375 96'620	85.345 91.616 128.772 118.008 104.659 107.001 102.417 91.912 95.588 91.912 94.020	92.097 92.752 101.073 121.661 113.927 102.653 102.653 97.328 96.615 93.631 93.631 92.097	99.171 99.665 107.706 103.252 102.987 101.942 100.412 99.416 99.416 98.444 94.805 94.805	101'071 92'646 96'677 113'703 111'177 103'153 101'584 97'617 97'381 95'748 96'445 97'239
,, July				90'207	90135	91.912			

REMARKABLE EVENTS.

1829: Peace between Russia and Turkey.—1830, 26 June: Accession of William IV. His present Majesty.—1830, 3 July: Revolution in France, Abdication of Charles X.—1830, August: Revolution in Belgium.—1830, November: Lord Grey announced the Reform Bill.—1831, July: The Dutch invade Belgium.—1832, June 7: The Reform Bill finally passed.

AN ACCOUNT showing the CURIENT MARKET PRICE of the following PUBLIC SECURITIES during the Six Years preceding August 1835. The Prices are taken at the first opening day after payment of the Half-yearly Dividend, and in each case are ex-dividend.

		PRICE	ES OF ENGLISH	I FUNDS.			
Dividence	ls Payable 5th Apri	l and 10th Octobe	er.	Dividends Payab	le 5th January an	id 5th July.	
DATE.	Long Annuities.	Reduced 3 per Cents.	Reduced 3½ per Cents.	DATE.	Consols.	New 34 per Cents.	
1829. Oct. 12 - 1830. April 6 - ,, Oct. 11 - 1831. April 6 - ,, Oct. 11 - 1832. April 6 - ,, Oct. 11 - 1833. April 6 - ,, Oct. 11 - 1834. April 7 - , Oct. 11 - 1835. April 6 -	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£. s. d. 98 2 6 99 12 6 95 7 6 86 17 6 86 $-$ - 90 5 0 90 17 6 93 15 - 94 15 - 97 7 6 98 10 - 98 10 - per Cent.	1830: Jan. 6 - , July 6 - 1831: Jan. 7 - , July 6 - 1832: Jan. 7 - , July 6 - 1833: Jan. 8 - , July 6 - 1834: Jan. 6 - , July 7 - 1835: Jan. 6 - , July 6 - -	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	£. s. d. (4 per Cents.) 100 17 6 90 89 12 6 90 90 17 6 94 5 - 95 7 6 97 2 6 98 17 6 98 12 6 99 2 6 per Cent.	

PRICES OF FOREIGN FUNDS.										
French 3 per Cent.	Rentes.	French 5 per Cent	t. Rentes.	Prussian 5 per Cent. Bonds.	Russian 5 per Cent. Bonds.					
Dividends pay 22d June and 22d I	able December.	Dividends pa 22d March and 22d	yable September.	Dividends payable 1st April and 1st October.	Dividends payable 1st March and 1st September.					
1829: Dec. 30 1830: June 26 " Dec. 22 1831: June 22 " Dec. 22 1832: June 23 " Dec. 28 1833: June 23 " Dec. 26 1834: June 25 " Dec. 27 1835: June 30 Per 3 france per Annum	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	1829: Sept. 22 1830: Mar. 22 ,, Sept. 22 1831: Mar. 23 ,, Sept. 22 1832: Mar. 22 ,, Sept. 27 1833: Mar. 22 ,, Sept. 28 1834: Mar. 24 ,, Sept. 24 1835: April 9 Per 5 france per Am	$\begin{array}{c} f. & c. \\ -107 & -\\ -106 & 25 \\ -97 & 50 \\ -81 & -\\ -86 & 50 \\ -96 & -\\ -96 & -\\ -96 & -\\ -101 & 25 \\ -102 & -\\ -105 & 25 \\ -105 & 25 \\ -107 & -\\ -num perpetually. \end{array}$	<i>f.</i> s. 1829: Oct. 14 - 101 5 1830: April 2 - 100 15 <i>m</i> Oct. 1 - 95 - 1831: April 2 - 97 5 <i>m</i> Oct. 3 - 97 10 1832: April 2 - 98 10 <i>m</i> Oct. 3 - 100 - 1833: April 3 - 101 - <i>m</i> Oct. 2 - 101 - 1834: April 24 - 102 - <i>m</i> Oct. nothing done. 1835: April, paid off. Per Cent.	$\pounds \cdot s.$ 1829: Sept. 2 - 99 - 1830: Mar. 1 - 108 - , Sept. 1 - 103 10 1831: Mar. 1 - 88 - , Sept. 1 - 90 - 1832: Mar. 2 - 97 - , Sept. 3 - 98 10 1833: Mar. 2 - 102 10 , Sept. 10 - 102 15 1834: Mar. 1 - 104 10 , Sept. 1 - 103 15 1835: Mar. 2 - 107 15 Per Cent.					

Taken from Wetenhall's List, authorized by the Committee of the Stock Exchange.

Cole and Mullens, Brokers.

(C.)

AN ACCOUNT of the MARKET PRICES of STOCK on each of the days under mentioned, viz.:

Friday, 24th July 1835.	•	Monday, 3 August 1835.
Bank Stock 2154	16	Bank Stock 215 141
3 per Cent. Reduced 91	90 3	3 per Cent. Reduced - -907 1 903
3 per Cent. Consols $90\frac{1}{4}$	$\frac{1}{2}$ $\frac{3}{8}$	3 per Cent. Consols
$3\frac{1}{2}$ per Cent., 1818 99 $\frac{1}{8}$		31 per Cent. Reduced 991 \$ 1
$3\frac{1}{2}$ per Cent. Reduced - 99 $\frac{1}{8}$	8;;	New $3\frac{1}{2}$ per Cents $98\frac{3}{2}$ $\frac{3}{2}$
New 3 $\frac{1}{2}$ per Cents 98 $\frac{3}{8}$	} 	Long Annuities ending Jan. 5]
Long Annuities ending 5 Jan.]	~ ~	1860
1860, Dividends, April and $16\frac{15}{16}$	78	Ditto New, ending 10 Oct. 1859 161 9 1
October	-	Ditto New, ending 5 Jan. 1860 164
Ditto New, ending 10 October		India Bonds
1859, Dividends, April and $16\frac{11}{18}$		Exchequer Bills 18 20 Pm
October		Omnium 3 21 - 3
India Stock 2554	6	Consols for 26 August 401 1 803
Ditto Bonds 10	12] _{Dm}	
Exchequer Bills 29	31∫ ¹	
3 per Cent. Consols for 26 August 903	+	
	-	Cole & Mullens, Brokers.

A COPY of CONTRACT for the LOAN of 15,000,000 *l*. to be raised under the authority of the Act 3 & 4 Will. IV. c. 73, for the COMPENSATION to the OWNERS of SLAVES; with Proceedings and Tenders respecting the same.

(D.)

Gentlemen,

Treasury Chambers, 25 July 1835.

I BEG to inform you, and request you will make it known in the usual manner, that on Wednesday next, at 11 o'clock, Lord Melbourne and I shall be ready to see any gentlemen who may be desirous of contracting for a Loan, under the provisions of an Act passed in the 3d & 4th years of His present Majesty's reign for the Abolition of Slavery.

We shall then inform the parties the amount which will be required, and the time and manner of the bidding; and I hope it will be convenient to you, or one of you, to meet those gentlemen here at the appointed hour.

I have the honour to be, Gentlemen, your most obedient servant,

(signed) T. Spring Rice.

To the Governor and Deputy-Governor of the Bank of England.

Treasury Chambers, 29 July 1835.

PROCEEDINGS at the Preliminary Meeting respecting the Loan of 15,000,000 *l*. proposed to be raised, under the authority of the Act 3 & 4 Will. IV. c. 73, for the Compensation to Owners of Slaves.

THE following gentlemen attended this meeting, in consequence of the Chancellor of the Exchequer's letter to the Governor and Deputy-Governor of the Bank of England of the 25th inst., to hear the terms proposed for the said Loan:-

Messrs. Rothschild, Montefiore, Sir J. R. Reid, Messrs. Irving, Baring, Mildmay, J. L. Goldsmid, Ricardo, Robertson, Hobhouse, Ward, &c. &c.

The Chancellor of the Exchequer observed, that in the arrangements which had been determined upon by the Lords of the Treasury for giving effect to the intentions of Parliament on this subject, it had been their earnest desire to accomplish the object in such a manner, as whilst full justice was done to the persons entitled to compensation, care should also be taken to produce the least disturbance or pressure in the money market, and to avert any inconvenient alterations in the state of the circulation.

The measures proposed were-

1. To contract for a Loan of 15,000,000 L, and to spread the instalments over a period ending on the 13th September 1836.

2. To give to those claimants, to whom payments should not be immediately made from money in hand arising from the instalments, certificates bearing interest, payable to bearer at the Bank of England; these certificates to be specifically charged upon the instalments of the Loan, and also receivable at the Bank as part of the subsequent instalments on which they are specifically charged.

The Chancellor of the Exchequer then stated, that it was proposed to give for every 100 *l*. subscribed in money, the amount of 75 *l*. Stock Three per Cent. Consols, 25 *l*. Three per Cent. Reduced, and to receive the biddings for the further amount in Long Aunuitics expiring 5 January 1860.

The interest on the Three per Cent. Reduced and Long Annuities to commence from 5 April 1835.

The interest on the Three per Cent. Consols to commence 5 July 1835.

An allowance of discount at two per cent. per annum in the usual manner.

No reserve for public companies.

597.

The days of payment to be as follows :---

								£.
1835.	Deposit, 6 Aug	ust	-	10 per cent.	-	-	-	1,500,000
	16 October	-	-	10 per cent.	-	-	-	1,500,000
	13 November	-	-	7½ per cent.	•	-	•	1,125,000
	11 December	-	-	7불 per cent.	-	-	-	1,125,000
1836.	13 January	-	-	10 per cent.	-	-	-	1,500,000
•	9 February	-	-	9 per cent.	-	-	-	1,350,000
	11 March -	-	-	9 per cent.	-	-	-	1,350,000
	12 April -	-	-	9 per cent.	•	-	-	1,350,000
	10 May -	-	-	6 per cent.	-	-	•	900,0 0 0
	14 June -	-		5 per cent.	-	•	۳	750,000
	12 July -	-	-	8 per cent.	-	-	-	1,200,000
	16 August		-	5 per cent.	-	-	-	750,000
	13 September	-	-	4 per cent.	-	•	-	600,000
				100			£	15,000,000
			_				_	

The biddings to be made on Monday next at this office, at 10 o'clock.

As it was several years since a Public Loan had been contracted for, the Chancellor of the Exchequer said he thought it right to inform the parties, that on the morning of the bidding the usual course would be observed by his laying on the table, previously to opening the tenders, a scaled paper containing the highest terms that the Lords of the Treasury would feel they should be justified in acceding to, and that in the event of the annuity asked for, in the several proposals, exceeding the amount specified in the scaled paper, it would in such case be opened, and the amount in it declared.

With reference to the remaining sum of 5,000,000*l*. to complete the West India Grant of 20,000,000*l*., but which is not raised by the present Loan, the Chancellor of the Exchequer said it would not be necessary for him to make any arrangement for raising 3,300,000*l*. of that sum in the present Session of Parliament, in consequence of the claims from the Mauritius and the Cape not coming into course of payment for a considerable time, and in respect to the money for Barbadoes, it stood upon a distinct footing from the rest, the Act for that Colony having been declared by the King in Council to be inadequate and unsatisfactory. Powers, therefore, would be taken in an Act of the present Session, to write in the amount of Stock in the books of the Bank of England, which would be eventually transferred to the claimants of Barbadoes, but which would not, in any contingency, come upon the market otherwise than gradually, and in proportion as the several claims of the proprietors are affirmed by the adjudication of the Commissioners.

To the Right Honourable the Chancellor of the Exchequer.

Honourable Sir,

WE hereby engage to take the Loan for 15 millions sterling, at, say

75 Consols,

25 Reduced Three per Cents.,

And 14s. 11d. Long Annuity 1860.

We are, honourable Sir, your obedient servants,

Fourteen shillings and eleven-pence Long Annuity. London, 3 August 1835.

SEALED PAPER laid upon the Table previously to opening the Tender.

Thirteen shillings and seven-pence Long Annuity.

(signed)

(signed)

T. Spring Rice.

Melbourne.

N. M. Rothschild.

Moses Montefiore.

Treasury Chambers, 3 August 1835.

Whitehall Treasury Chambers,

3 August 1835.

WE hereby engage with the Lords Commissioners of His Majesty's Treasury to subscribe the sum of 15 millions in money, for the Loan proposed to be raised under the authority of the Act 3 and 4 Will. IV. c. 73, for the compensation to owners of slaves.

For every 100 *l*. subscribed to receive 75 *l*. Stock in the Three Pounds per Centum Consolidated Annuities; 25 *l*. Stock in the Three Pounds per Centum Reduced Annuities; and 13 *s*. 7 *d*. Long Annuities expiring the 5th January 1860.

The interest on the Three Pounds per Cent. Reduced Annuities and Long Annuities, to commence from the 5th day of April 1835; and on the Three Pounds per Cent. Consolidated Annuities, from the 5th day of July 1835.

A discount, at the rate of two pounds per centum per annum, to be allowed after the payment of ue deposit on the whole money advanced at any time on or before the 15th August 1836, beyond the instalments up to the latest period of them, in the usual manner.

For payments in full, made on or before the 7th October or 2d April, the dividends on the Three Pounds per Cents. Reduced Annuities and the Long Annuities, becoming due on the 10th October and the 5th April, will be paid on those days; and for payments in full, made on or before the 2d January and the 2d July, the dividends becoming due on the 5th January and the 5th July, will be paid on those days.

be as follows, vi Thursday, 6th 16 October, pa 13 November, 11 December, 13 January, 9 February, 11 March, 12 April, 10 May, 14 June, 12 July, 16 August, 13 September,	iz. August, dep yment of - ditto -	$\begin{array}{cccccccccccccccccccccccccccccccccccc$. per cent	t.
Governor. eputy-Governor,	. •	100		N. M. Rothschild. Moscs Montefiore.
Governor.	dersigned, Melbourne, T. Spring Seymour. W. H. Ore R. Steuart. R. More O	Rice. I. Ferrall.	Lords (the	Commissioners of Treasury.
hambers,	<u></u>			F. Baring.
the Votes and Veneris, 	(E.) 1 PROCEEDI 4° die Septe 2, and Ques 50,000 l. has 50,000 l. has 50,00	NGS of Th mbris, 1834 tion propos been borrow 100 l. in Co very - e in 1860, from 5th l. remain- posit -} Lonsols, which at of the am	e House 5. ed, —" T wed by th onsols, as = £.11 = 1 = 1 th is equations for the second s	that it is the opinion of this e Chancellor of the Exche- follows, viz. : - £. 100, money. 7 1 3 9 19 9 = 13 10 7 £.86 9 5 al to a rate of interest of Stock, and the price of such
	be as follows, v Thursday, 6th 16 October, pa 13 November, 11 December, 13 January, 9 February, 11 March, 12 April, 10 May, 14 June, 12 July, 16 August, 13 September, Governor. puty-Governor. puty-Governor. bambers, 	be as follows, viz. Thursday, 6th August, dep 16 October, payment of - 13 November, ditto - 11 December, ditto - 13 January, ditto - 13 January, ditto - 14 December, ditto - 12 April, ditto - 14 June, ditto - 12 July, ditto - 13 September, ditto - 14 June, ditto - 15 August, ditto - 16 August, ditto - 17 Spring - Seymour. <i>W. H. Ord</i> <i>R. Steuart.</i> <i>R. More O</i> Fovernor. 14 June, <i>Melbourne.</i> <i>T. Spring Seymour.</i> <i>W. H. Ord</i> <i>R. Steuart.</i> <i>R. More O</i> Fovernor. 14 December, <i>Melbourne.</i> 15 Spring - 16 August, <i>Melbourne.</i> <i>C. Spring Seymour.</i> <i>W. H. Ord</i> <i>R. Steuart.</i> <i>R. More O</i> Fovernor. 16 August, <i>Melbourne.</i> <i>Seymour.</i> <i>W. H. Ord</i> <i>R. Steuart.</i> <i>R. More O</i> Fovernor. 16 August, <i>A o die Septer</i> <i>J. CE.</i>) 17 the VorEs and PROCEEDI <i>Veneris</i> , 4° die Septer <i>J. Ceneris</i> , 4° die Septer <i>J. Stock Consols</i> , and 26 Reduced. 50 of 3 per Cent. Stock for e f 10 Long Annuities, terminable 16 J. 14 s. 4 d. for 1 J terest due on Reduced, viz.: 19 on 25 J <i>r</i> prompt payment of the dep 26 price of every 100 l. of Ca cent. or 3 l. 9 s. $4\frac{67}{105}$ d. 17 by the following statement	be as follows, viz. Thursday, 6th August, deposit of 10 Å 16 October, payment of 10 13 November, ditto 7½ 11 December, ditto 7½ 13 January, ditto 7½ 13 January, ditto 10 9 February, ditto 10 9 February, ditto 9 10 May, ditto 9 10 May, ditto 5 12 July, ditto 5 13 September, ditto 5 13 September, ditto 4 100 Governor. cepted by the undersigned, Melbourne. T. Spring Rice. Seymour. W. H. Ord. R. Steuart. R. More O'Ferrall. Governor. buty-Governor. buty-Governor. (E.) 1 the Vorres and PROCEEDINGS of Th Veneris, 4° die Septembris, 1832 	be as follows, viz. Thursday, 6th August, deposit of 10 l , per cent 16 October, payment of -10 - 10 13 November, ditto $-7\frac{1}{2}$ - 11 14 December, ditto $-7\frac{1}{2}$ - 13 15 April, ditto -9 - 10 16 August, ditto -9 - 10 17 March, ditto -9 - 10 18 April, ditto -9 - 10 19 February, ditto -9 - 10 10 May, ditto -66 - 12 14 June, ditto -55 - 12 12 July, ditto -55 - 12 13 September, ditto -55 - 13 13 September, ditto -4 - 100 100 Governor. puty-Governor, cepted by the undersigned, <i>Melbowrne.</i> <i>T. Spring Rice.</i> <i>Seymour.</i> <i>W. H. Ord.</i> <i>R. Stewart.</i> <i>R. More O'Ferrall.</i> Fovernor. buty-Governor. (E.) 1 the Vorges and Procgedings of The Houses <i>Veneris,</i> 4° die Septembris, 1835. Motion made, and Question proposed," T e Loan of 15,000,000 l has been borrowed by th bl, 9s, 5d money, for every 100 l in Consols, as 75 Stock Consols, and 25 Reduced. 50 of 3 per Cent. Stock for every 16l. 14s. 4d. for 1l

Loan of 15 millions of money, as will appear on the consolidated Fund have been incurred for the said For 11,250,000 l. of Consols, payable from 5th July, at 3 per cent. - £. 337,500 For 3,750,000 l. of Reduced, payable from 5th April, at ditto - - 112,500 Making a perpetual charge of - - £. 450,000

And 101,875% of Long Annuities, payable from 5th April 1835 to January 1860

4th. That if the whole of the Loan had been raised in one Stock, and that Stock had been 3 per Cent. Consols, at the price above stated of 861.9s.5d., the gross amount of 3 per Cent. 597.

25

capital Stock added to the debt of the country would be 17,346,890 *l.*, and a perpetual annual charge for the same of 520,406 *l.* 14 s. payable from the 5th of July 1835.

5th. That if the whole had been raised in Reduced 3 per Cents. at the price of 87 l. 4s. 5 d., being the difference of 15s. of interest added to the price of Consols, the amount of 3 per Cent. Reduced capital Stock added to the debt of the country would be 17,197,726 l., and a perpetual annuity of 515,931 l. 15s. payable from 5th April 1835.

6th. That if the whole Loan had been contracted in Long Annuities, payable from 5th April 1835, and terminating in January 1860, the annuity during that period would have been 897,3087.

7th. That if the Loan of 15 millions had been raised in the New $3\frac{1}{2}$ per Cent. Stock, at the price of 97 *l*. in money for every 100 *l*. Stock, and that the same discount had been allowed for prompt payment as on the present Loan, this would have given a nett price, after deducting discount, of 95 *l*. 1 s. 7 *d*. in money for every 100 *l*. Stock; and, thereby, the capital added to the debt of the country would have been 15,776,327 *l*., and the perpetual annuity 552,171 *l*. 9 s. payable from 5th July 1835; being at the rate of 3 *l*. 13 s. 8 *d*. per cent. for money, or 3 *l*. 13 s. $7\frac{47}{400} d$.

8th. That the capital Stock created by the present Loan of 15 millions of money, when estimated in Consols, being equal to 17,346,890 *l*., and the capital, if raised in a $3\frac{1}{2}$ per Cent. Stock being only 15,776,327 *l*., the increase in the capital of the debt by the present Loan, as compared with a Loan in the New $3\frac{1}{2}$ per Cent. Stock, is 1,570,563 *l*.

9th. That if the Loan had been contracted in the New $3\frac{1}{2}$ per Cent. Stock, at the price of 97 *l*, with a guarantee against the reduction of interest for fifteen years; and that at the end of that term the $3\frac{1}{2}$ per Cent. Stock were reduced to a 3 per Cent. Stock, the comparison with the present contract would be as follows:—

To borrow in a 31 per Cent. Stock, at the price of 97 <i>l</i> ., reduced count to 95 <i>l</i> . 1 s. 7 <i>d</i> ., is to pay interest at the rate of	ced by -	dis-}	£.3	13	8
The present Loan is contracted for at the rate of interest of	-	•	3	9	5
Showing a greater rate of interest of	-	-	£	4	3

paid on the $3\frac{1}{2}$ per Cent. Loan; which difference of $4 \ s. 3 \ d.$ in the rate of interest, is an annuity; and an annuity of $4 \ s. 3 \ d.$ interest, being reckoned at $3\frac{1}{2}$ per cent., will increase in fifteen years to a sum of $4 \ l. 2 \ s.$; which sum again, interest being reckoned at 3 per cent., is equivalent to a perpetual annuity of $2 \ s. 5\frac{1}{2} \ d.$; and therefore supposing the $3\frac{1}{2}$ per Cents. to be reduced to 3 per Cents. after fifteen years, the amount will stand thus:—

The rate of interest at which the present Loan is contracted for, is	-	£. 3	9	5
The rate of interest on a $3\frac{1}{2}$ per Cent. Stock, reduced to $\{ \pounds, 3 - $	-	-		
Add the perpetual annuity arising from the loss of 41. 2.5.				
being the accumulation of the excess of interest of \rangle - 2	$5\frac{1}{2}$			
4s. 3 d. paid during the fifteen years J		3	2	5호
Showing a difference of	-	£	6	113

per cent. payable, for ever after, on the whole 15 millions, as at present contracted for, more than would have been payable if the Loan had been raised as a 3½ per Cent. Loan, as stated in Resolution 7.

10th. That the difference of $6s. 11\frac{1}{2}d$, per cent. upon 15 millions, constitutes a permanent annuity of 52,187 *l*. 10s.; but this annuity, though permanent, after it has once begun, is a reversion, the payment of which commences at the end of fifteen years, and the present value of which, interest being reckoned at $3\frac{1}{2}$ per cent. during fifteen years, and at 3 per cent. for ever after, is 1,038,341 *l*. 12 s.

11th. That, besides the above loss to the public of 1,038,341 l. 12 s. arising from the difference of charge for the annuity, there will be an additional loss to the public of 1,570,563 l. by the increase of capital of the National Debt, as shown in the 8th Resolution.

12th. From these facts it appears, that if the Chancellor of the Exchequer had raised the 15 millions in a $3\frac{1}{2}$ per Cent. Stock at 97 *l*., reducible in fifteen years to a 3 per Cent. Stock, this would have been equivalent to a nett price of 92l. 9s. 1 *d*. for 100 *l*. Consols, instead of the nett price of 86l. 9s. 5d. which he receives by the present contract; being a loss of 5l. 19s. 8 *d*. per cent., commencing from the present time; and exclusive also of the increased amount of the capital of the Debt."

Amendment proposed, to leave out from the word "That," to the end of the Question, in order to add the words, "The terms on which the Loan of 15,000,000 l, for the payment of compensation to the Owners of Slaves, has been contracted, are such as to afford the most satisfactory proofs of the public credit of the British Empire:"—(Mr. Chancellor of the Exchequer:)—Question, "That the words proposed to be left out stand part of the Question," put, and negatived:—Words added:—Main Question, as amended, put, and agreed to.

ACCOUNT of the COMMISSIONERS for the REDUCTION of the NATIONAL DEET, being the Sums received and paid by them on account of the "WEST INDIA COMPENSATION ACCOUNT." Dr

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					CASH	PAID.	
The Week ending		TOTAL CASH RECEIVED.	The Week ending		For Slave Compensation, including Interest.	For Discount on Sums paid in full, on account of the Loan of £. 15,000,000.	TOTAL CASH PAID.
1835.		£. s. d.	1835.		£. s. d.	£. s. d.	£. s. d.
Aug 8	To Cash, on account of Loan of 15,000,0002 raised anno 1835	1.685.040	Aug 8	By Cash -		4,429 - 3	
15	,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,,	443,052	15	" •		'9,302 5 3	
22 29	· · · · · · · · · · · · · · · ·	1,159,231 10 - 1,210,421 5 -	22 29	», – ", –		24,798 10 5 25,462 3 7	
Sept 5	, ₂₂ ,, ₂₅	146,056 10 -	Sept 5			3,014 3 5	
12 19	· · · · · · · · · · · · · · · · · · ·	23,976 191,295	12 19	» – » –	154,100 3 9	485 9 4 3,793 4 9	
26	· · · · · · · ·	181,858 10 -	26	" -	213,539 11 8	3,534 5 3	
Oct 3 10	29 27 -	392,388 15 - 1,577,273 15 -	Oct 3 10	» - » -	183,603 19 3 151,950 5 6	7,460 19 4 29,503 - 3	
17 24	39 39	3,459,132 15 -	17 24	"-	423,376 15 4	52,934 7 11	
31	yy yy yy ""	67,648	31	" -	547,856 6 10	1,187 16 9	
Nov 7	23 <u>27</u>	256,890	Nov 7 14	··· ·	572,967 7 4	4,402 3 1	
21	29 99 99 29 99	110,924 7 6	21	" -	750,747 18 10	1,805 11 7	Į
20 Dec - 5	» »	174,014 2 6 902 586 15 -	20 Dec 5	,, - 	616.324 13 11	3.162 4 6	
12	>> >> >> >>	1,223,845 10 -	12	" -	1,469,776 17 11	17,352 7 2	
26	279 272	10,193 12 6	19 26	"	347,855 16 4	147 13 7	
1836.			1836.		Į		
Jan 2		74,886 10 -	Jan 2	"-	72,776 16 9	1,051 13 1	
9 16	· · · · · · · · · · · · · · · · · · ·	248,807	9 16	» - " -	116,048 18 3 441,834 18 8	3,412 19 3 1,258 5 5	
23 30	······································	27,500	23 30	··· ·	971,461 12 3	360 2 7 37 12 6	
Feb 6	· · · · · ·	3,025	Feb 6		290,750 16 7	432 2 1	
13	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	137,979 16 6	13 20	,, .	395,950 11 6 325,516 10 6	1,458 9 9	
20	, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,, ,	16,790	27	" " -	436,031 12 11	185 18 8	
March 5	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	5,453 16 -	March 5 12		300,102 6 8 499,590 15 9	54 5 5 206 4 4	
12	33 39 -	4,273 19 -	19	» » -	389,661 13 7	37 15 8	
26 April - 9	" " " " " " " " " " " " " " " " " " "	1,480	20 Anril - 2	», –	311.270 9 1	13 16 11	ĺ
	To Cash, on account of Loan -	40 14 -	9	" -	139,954 8 2	- 7 -	
16 23	yy yy	9,824 18 6	23	» - » -	78,622 8 3	50 4 6	
30	>> >> - -	• • •	30 M., 7	"	172,572 4 6		
May - 7 14	99 99 99 99	1,120 2,239 19 -	May - 7	,, - ,, -	239,866 12 5	845	
21 28	27 29 2 2 2	440	21 28	»» = » =	81,267 17 9 39,943 4 4	217 2	
June - 4	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··	220 – –	June - 4	,, -	39,248 1 8	155	
11 18	29 99 -	3,416 12 6	11 18	,, - ,, -	44,208 b 4 39,528 12 11	11 1 8	
25	To Cash returned, awarded in error	193 11 7	25	"-	. 212,488 4 7		
July - 2 	To Cash, on account of Loan - To Issue from the Consolidated	56 10 6	July - 2	» ·	78,976 13 1	- 4 /	
a	Fund, for Back Interest	200,000	9		95,833 11 4	6 2 10	
-	To Cash, on account of Loan	1,700	16		43 746 11 8	5 19 1	
16 23	··· ·· ·	2,020	10	»» –	40,256 12 9	<i>4 15</i> 1	
30	29 21 		30	» •	20,195 19 11		• •
Aug 6 12	99 99		Aug 0 12	>> - >> -	16,887 17 4		
		/		£.	15,055,459 12 7	228,966 14 7	15,284,426 7 2
			By Cash p	aid Stamp			4,000
			Uthce -	}			
		/	the Bank	of England			343,776 12 6
	£.	15,632,202 19 8					15,632,202 19 8
_	1		l	1			

National Debt Office, 15 Aug. 1836.

AN ACCOUNT of the DEFICIENCY BILLS and the Interest charged thereon in each Quarter, commencing 5th July 1835, up to the present time.

								A mount EXCHEQUEI Issued	of RBI	ILLS	INTERE	ST.
5 July 1835 - 10 October 1835 5 January 1836 5 April 1836 -	- - -	- - -	-	- - -	-	- - -	- - -	£. 6,717,240 4,016,190 4,640,996 4,474,523	s. 3 2 7 1	d. 5 7 7 5	£. s. 17,306 1 5,041 1 10,544 6,578 1	<i>d</i> . 6 10, 2 8 2 3 3 1
5 July 1836, the a	mount	to be	issue	d -	•	•	-	6,412,876	14	7		

STATEMENT of the AMOUNT that would have been paid up on account of the LOAN of £. 15,000,000 at the period for the payment of each Instalment under the Contract, and of the Amount of the Compensation which had been awarded for payment at the same periods.

DATE of INSTALME	NT.		AGGREGATE RECEIPT.	AGGREGATE OF AWARD.
1835. 6 August - 16 October - 13 November - 11 December - 1836. 13 January - 9 February - 11 March - 12 April - 10 May 14 June - 12 July - 16 August - 13 September -		 10 per cent. 10 per cent. 11 per cent. 12 per cent. 10 per cent.<	 £. 1,500,000 3,000,000 4,125,000 5,250,000 6,750,000 8,100,000 9,450,000 10,800,000 11,700,000 12,450,000 13,650,000 14,400,000 15,000,000	<i>£. s. d.</i> 2,074,098 2 11 $\frac{1}{2}$ 4,822,830 18 $4\frac{1}{2}$ 8,378,653 6 10 $\frac{1}{2}$ 9,777,268 14 $6\frac{1}{2}$ 1,687,968 7 $5\frac{1}{2}$ 13,100,271 17 $2\frac{1}{2}$ 13,768,497 13 $6\frac{1}{2}$ 14,201,500 6 $-\frac{1}{3}$ 14,391,400 5 1 14,579,133 4 $9\frac{1}{2}$ 14,739,578 18 $9\frac{1}{2}$

Whitehall Treasury Chambers, 11 August 1836.

Relating under the Act 3 & 4 WILL. IV. c. 73, for the ABOLITION OF SLAVERY. Ordered, by The House of Commons, to be Printed, SLAVE COMPENSATION FUND. ទ the 19 August 1836. R WEST INDIA COMPENSATION, (Mr. Baring. Ħ H d Ħ z

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