

depend upon the net revenue they produce or are capable of producing. There are other items which bring up the total assets to \$4,075,952, nearly as much as the total amount of the debt. Among these are standing to the credit of the sinking fund bank shares, which, at par, represent \$268,000. What may be their value is not stated. It is obvious that the Corporation made a mistake in selecting for investment a form of security which makes them partners in a risky business, and liable for twice the amount of the stock. A sinking fund should be placed beyond the risks of business, as it would be if it represented some form of mortgage or government security, judiciously selected. There is \$55,984 cash in bank, and \$87,817, representing the sale of the palace by the Local Government. If there be no over estimate of these assets, and if the amount of \$200,000 due by Baron Grant had been good—it is not said what dividend is expected on it—and the late treasurer, M. Dorion, had not been deficient, the city would be able to show more than full value in hand for all its debt. As it is, its assets are large relatively to its debt.

But the real difficulty is that the revenue yearly falls short of the expenditure. Since 1871 the total deficiency has amounted to \$472,555. The new Treasurer, when he took office, found a floating debt of nearly half a million of dollars, credit at zero, and confidence gone. This debt was bonded on terms necessarily not the best. Finally matters were so arranged as to leave a deficit for 1878-9 of \$44,686.

The great question is, How is the revenue to be increased? If the exemptions could be abolished, the revenue could be increased one-fourth without an increase in the rate of taxation. The property paying taxes amounts to \$15,848,564 in value; that exempt to \$5,139,000. The exemptions are thus divided: Catholic, \$1,819,000; Protestant, \$340,000; Federal Government, \$2,051,000; Local Government, \$929,000. The Treasurer does not for a moment assume that these exemptions can be abolished; but he fancies that a large part of the exempted proprietors could be induced to tender voluntary aid to the city. It must be assumed that M. Le-franc has some ground for this belief, though it is obvious that this is a resource which it would not be safe to rely much upon. The Federal Government is not likely to give anything, the Local little or nothing, and the Roman Catholics, in view of the charges on their revenue, plead poverty. On the whole, we must conclude that, though the city of Quebec is embarrassed in its finances, its case ought not to be desperate. The difficulty is that the remedy for the financial distress has yet to be found.

THE TAY BRIDGE.

The wreck of this daring structure, by which a train-load of passengers—how many will never be known, but almost certainly over one hundred—locked into the railway carriages, as is the cruel custom in Great Britain, were plunged into the angry Tay, is among the most startling of recent railway accidents. A violent gale was blowing at Dundee on the evening of Sunday week; vessels were cast ashore, buildings nearly unroofed, and pedestrians even afraid to be abroad, when the North British Railway train left its station, and, at 8 p.m., entered upon this link of stone and iron, two miles long, which here spans the Firth of Tay. (A description of the bridge, with its dimensions, &c., was given in the *MONETARY TIMES* of May 24th, 1878). Doubts were expressed as to whether the train would venture over in such a wind, and some persons watched it gliding along the girders. Suddenly a flash of fire blazed out, a sheet of light was seen to fall towards the water, and all was dark again. In an agony of dread and doubt, some railway officials went on foot along the bridge a mile or more, and found a gap where the high girders began; a span was gone, and the train had disappeared in the water, ninety feet below. As soon as steamers dared venture to the scene, it was found that eleven spans of 245 feet each, and one of 145 feet had fallen, leaving a gap in the great structure over half a mile in extent. Not one passenger is known to have been saved.

Theories as to the cause of this sad disaster vary greatly, Sir Thomas Bouch, the builder of the bridge, is of opinion that the train left the rails, was thrown with the force of the wind and its own momentum against the side of the iron girder, and overthrew it, with a concussion that would explain the shower of sparks seen from the shore. But this explanation will not account for the overthrow of so many spans as twelve. Another theory, considered by those who have seen the bridge and watched its construction, is that the furious gale attacked it on its weakest side, "blew into the hollow of the elbow,"—the bridge being built with a curve as when one bends his arm slightly—and whelmed it over at the part where the train runs along the bottom of the high girders, instead of, as between the other piers, along the top of the lattice work. Such of the American Scientific journals as we have seen, lean to the opinion, expressed by some British Engineers years ago, that enough allowance had not been made for wind pressure in erecting the Tay Bridge. Certainly, a girder 245 feet in length, 30 feet in height, and only some 15

to 16 feet wide, with no side stays possible, has a fearful pressure to encounter from storms when it spans an arm of the ocean, and is exposed to the full sweep from the North Sea. The tests made of its strength seem to have been directed to its carrying capacity, *i.e.*, its power to bear pressure from above; and there appears to be no doubt on that point. The adequacy of its foundations, considering the quicksands through which many of them had to be sunk, was more open to question. Meantime, no sufficient explanation can likely be made till the investigating commission has reported.

TORONTO, GREY & BRUCE RAILWAY

The efforts made by this company to effect arrangements with its bondholders and the municipalities through which it passes, to secure the widening of its gauge, have met with partial success. Indeed, in the negotiations with English bondholders, who, as holders of a first mortgage, have the virtual control of the road, concessions were made which are as great as could well be expected. The bondholders, we are told, consent to forego the two years interest at six per cent. now in arrear; to receive no interest for the year 1880; and to accept interest at the rate of five per cent. per annum after January 1st, 1881.

This agreement relieves the company of \$240,000 of present debt, of \$120,000 for 1880, and lessens its burdens by \$20,000 a year thereafter, during the currency of the bonds. The cost of widening the gauge, &c., is estimated by Messrs. Shanly and Gzowski at \$800,000. It is hoped that sufficient will be obtained from the Ontario Government and the various municipalities to amount, with the saving already mentioned, to the cost of the improvements. Nothing definite can be said, however, until the Government has pronounced upon the application. If the expected grant be made, the company has the promise of leading men in each municipality that liberal assistance will be rendered. But failing that grant we infer that the scheme falls through.

With respect to the statement in the *Globe* of Wednesday that the Grand Trunk had been promised running powers over the Toronto, Grey & Bruce in the event of its being widened, and that the latter would thereby become virtually a branch of and controlled by the former, we learn that no such arrangement has been either made or promised. Cars of the one road may be run upon portions of the other, for the convenience of each, as is now done by the Midland, the Central, and even the Great Western with the Grand Trunk or other roads, and a