Municipal Debt Instruments

NOVEMBER 2017

BANGKOK

For discussion today

1. Overview of debt instruments
2. Revenue streams = ability to pay
3. Pledges, liens, hypothecation, etc.
4. Credit enhancements
5. Structuring debt service
6. Borrowing wisely

1. Overview of debt instruments

1. Loans
2. Municipal bonds
3. Lease financing
4. PPPs

Terminology and issues

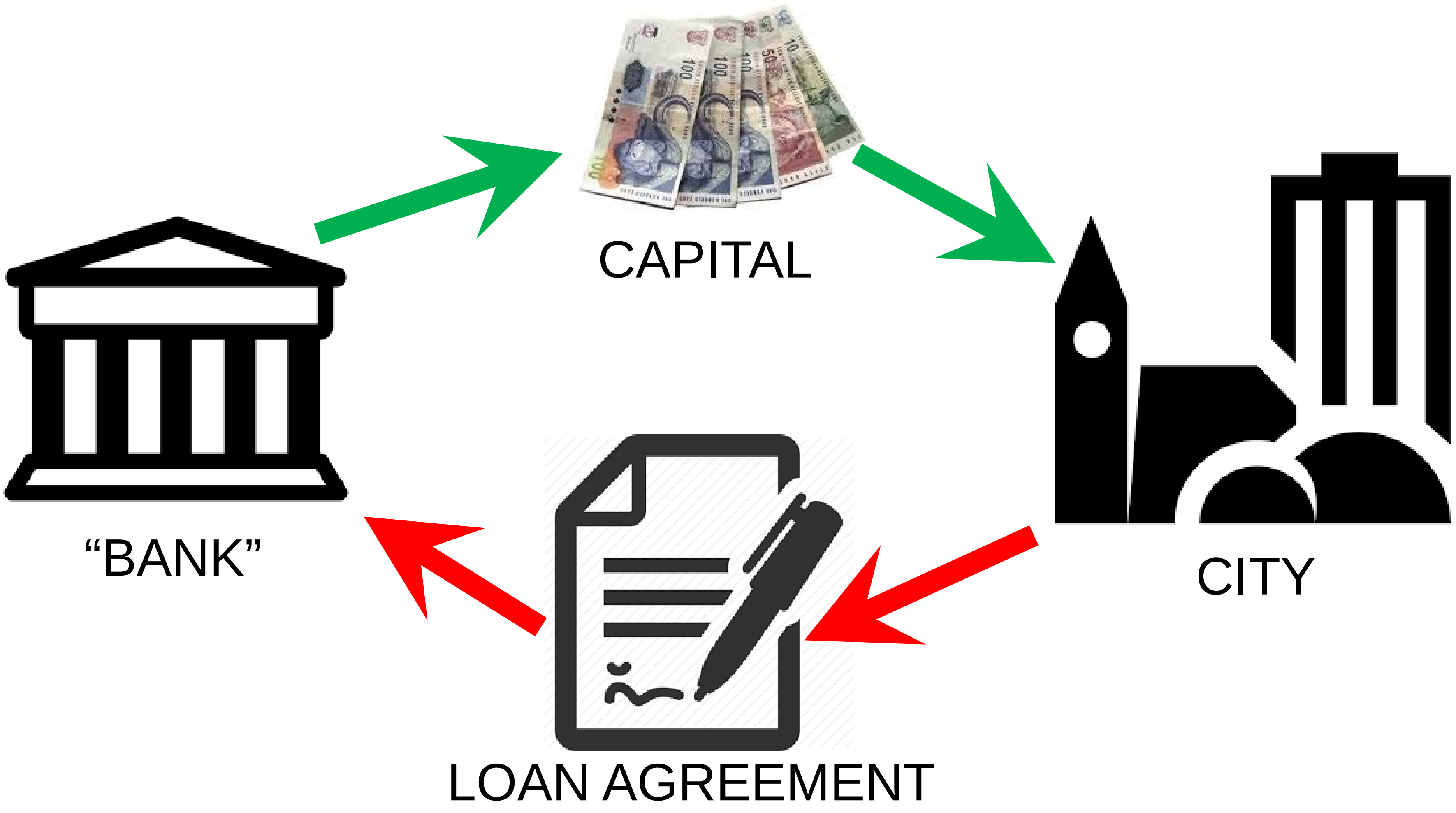
Loans

1. Borrower
2. Lender
3. Maturities must match
4. Small-scale borrowers don’t have a choice

Bonds

1. Issuer
2. Bondholder
3. Liquid secondary market brings in more investors
4. For large scale borrowers

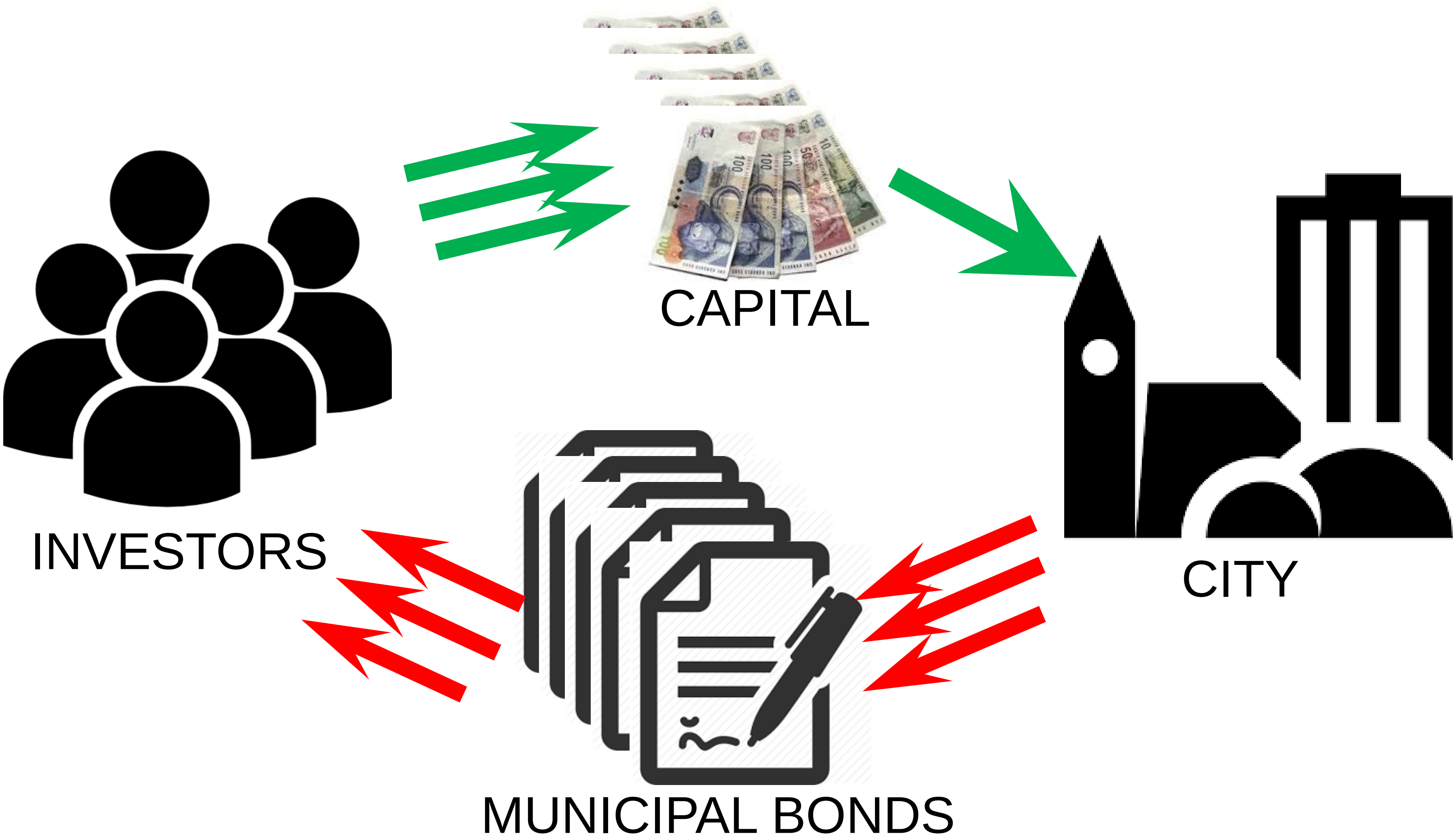
Loans



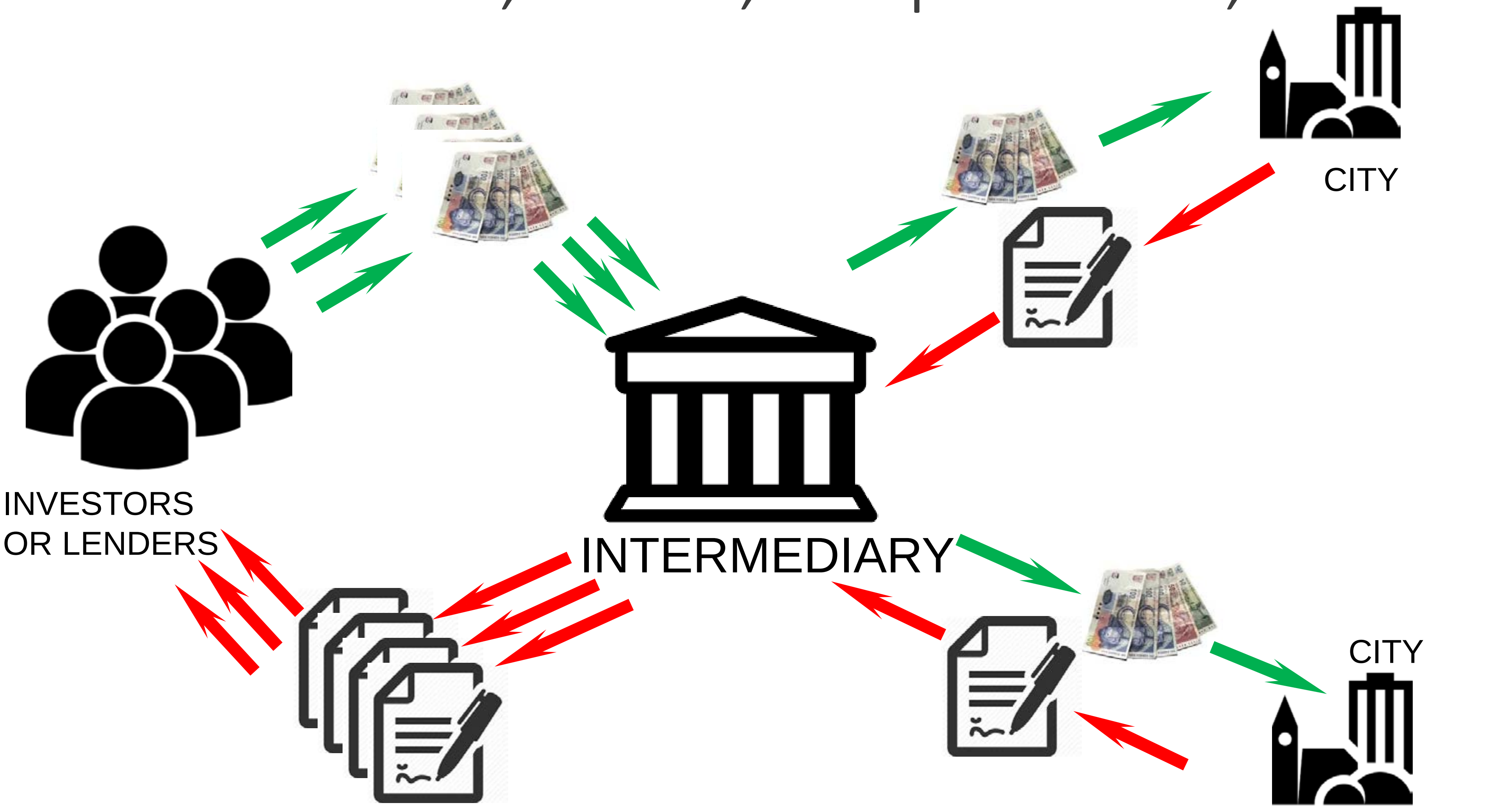
DBSA – Johannesburg loan example

- 2015/16 Capital Expenditure Programme
- ZAR 2,5 billion
- 20 year term

Municipal bonds



Intermediaries: bond banks, MDFs, cooperatives, etc.



2. Revenue = ability to pay

- Principle:

- any revenue stream or asset works
  - Grants and transfers from central government

- Practice

- revenue streams municipality can control work best
  - Taxes
  - Fees and charges
  - Capital revenue

3. Pledges, liens, security interests, hypothecation

1. Legal frameworks vary:
   - General law re how debt can be secured
   - Law re security a municipality can give
   - Law re lender's remedies against municipality
2. Core principle:
   - Less risk → cheaper borrowing
   - High risk → no lending, or expensive borrowing

Specific types of instruments

- “General obligation” bonds
- Revenue bonds
  - TIF bonds
- Green bonds
- Retail bonds

4. Credit enhancements

- Guarantees, insurance, letters of credit
- Reserve funds
- Sinking funds
- Covenants
- Other

5. Debt service

- Size matters
  - How much total?
  - How much each period?
- Shape matters

A. F. K.

○48252○

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E PLURIBUS UNUM

THREE PER CENT LOAN OF 1898.

1898 — 1918

A

The United States of America

ARE INDEBTED UNTO THE BEARER IN THE SUM OF

20 TWENTY DOLLARS 20 TWENTY DOLLARS 20

This bond is issued under authority of an Act of Congress entitled "An Act to provide ways and means to meet war expenditures" approved June thirteenth eighteen hundred and ninety-eight, and is redeemable at the pleasure of the United States after the first day of August, 1908, and payable August 1, 1918 in coin, with interest at the rate of three per centum per annum payable quarterly in coin, on the first day of November, February, May and August in each year. The principal and interest are exempt from all taxes or duties of the United States as well as from taxation in any form by, or under State, municipal or local authority.

○48252○

Act of June 13, 1898.

Entered [signature]

Recorded [initials]

Washington, D.C. August 1, 1898.

J. W. Lyons
Register of the Treasury.

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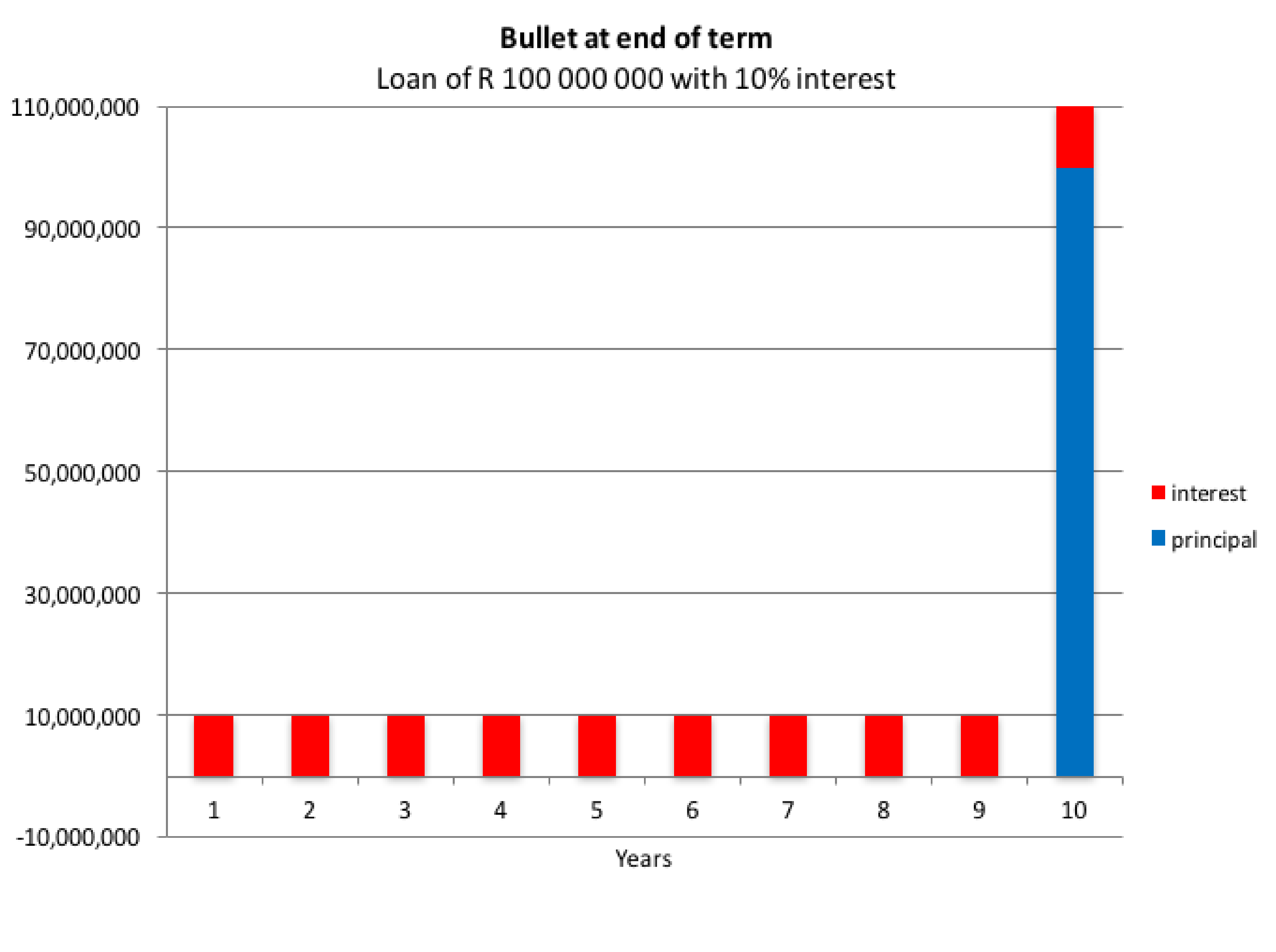
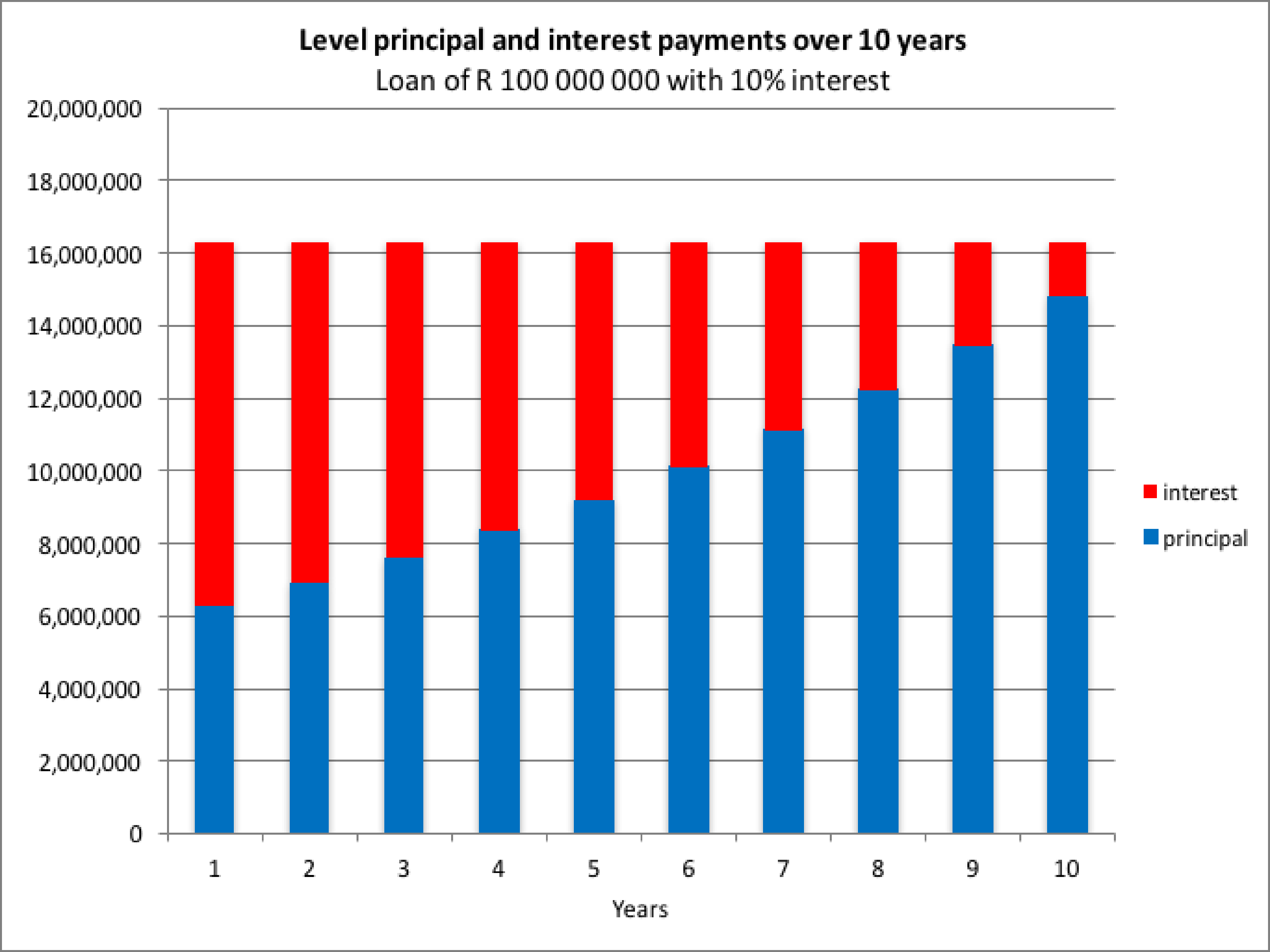
THE UNITED STATES OF AMERICA WILL PAY TO THE BEARER for three months interest due THE FIRST DAY OF … FIFTEEN CENTS 15 CTS. ON BOND NUMBER ○48252○ FOR $20. THREE PER CENT LOAN OF 1898. J. W. Lyons

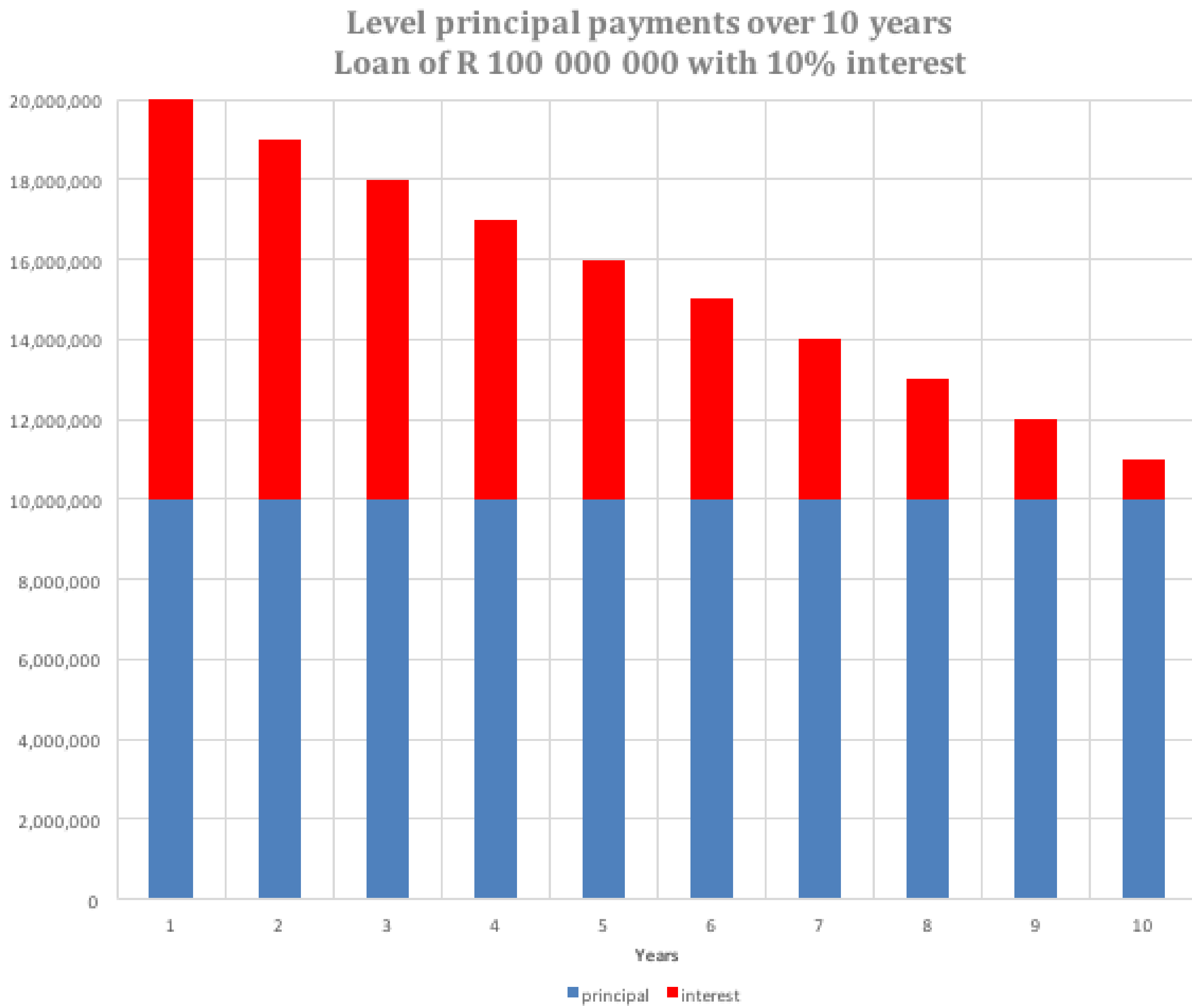
80 — AUG. 1918	79 — MAY 1918	78 — FEBY 1918	77 — NOVR 1917	76 — AUG. 1917
75 — MAY 1917	74 — FEBY 1917	73 — NOVR 1916	72 — AUG 1916	71 — MAY 1916
70 — FEBY 1916	69 — NOVR 1915	68 — AUG. 1915	67 — MAY 1915	66 — FEBY 1915



Bullet at end of term
Loan of R 100 000 000 with 10% interest
110,000,000
90,000,000
70,000,000
50,000,000
30,000,000
10,000,000
-10,000,000
1
2
3
4
5
6
7
8
9
10
Years
interest
principal



Level principal and interest payments over 10 years
Loan of R 100 000 000 with 10% interest
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1
2
3
4
5
6
7
8
9
10
Years
interest
principal


Level principal payments over 10 years
Loan of R 100 000 000 with 10% interest
20,000,000
18,000,000
16,000,000
14,000,000
12,000,000
10,000,000
8,000,000
6,000,000
4,000,000
2,000,000
0
1
2
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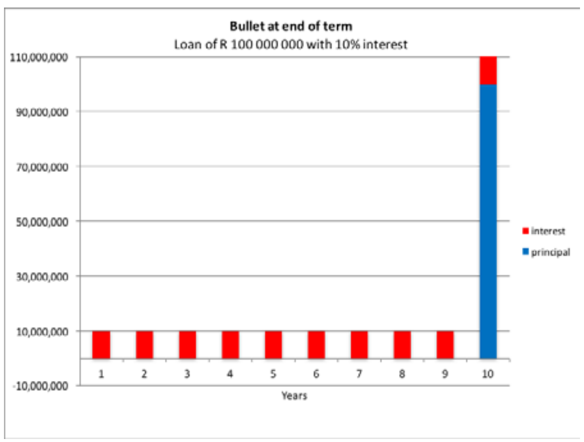
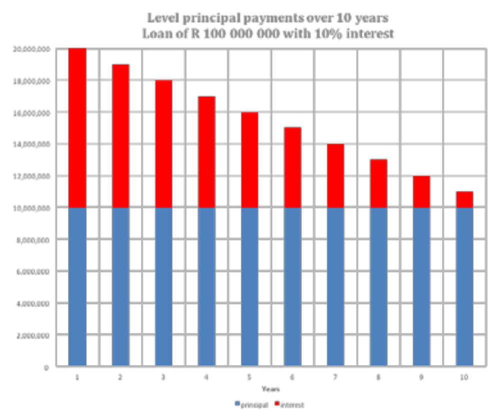
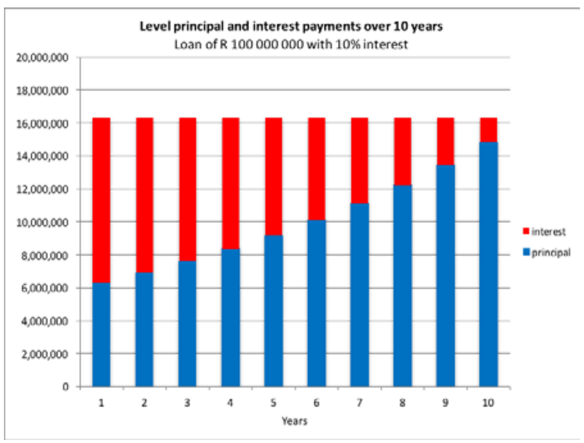
5
6
7
8
9
10
Years
principal
interest

Which do you prefer, why?





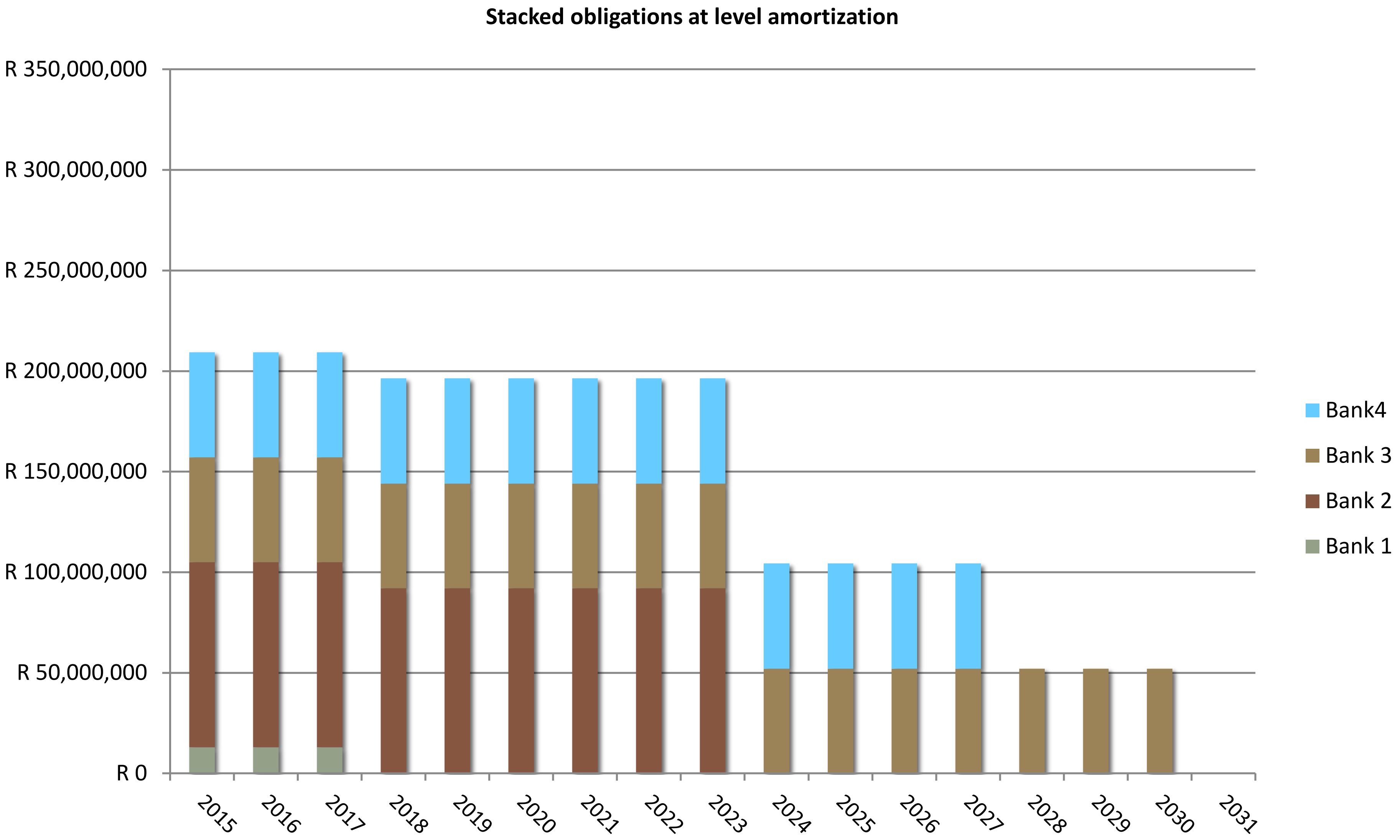


Bullet

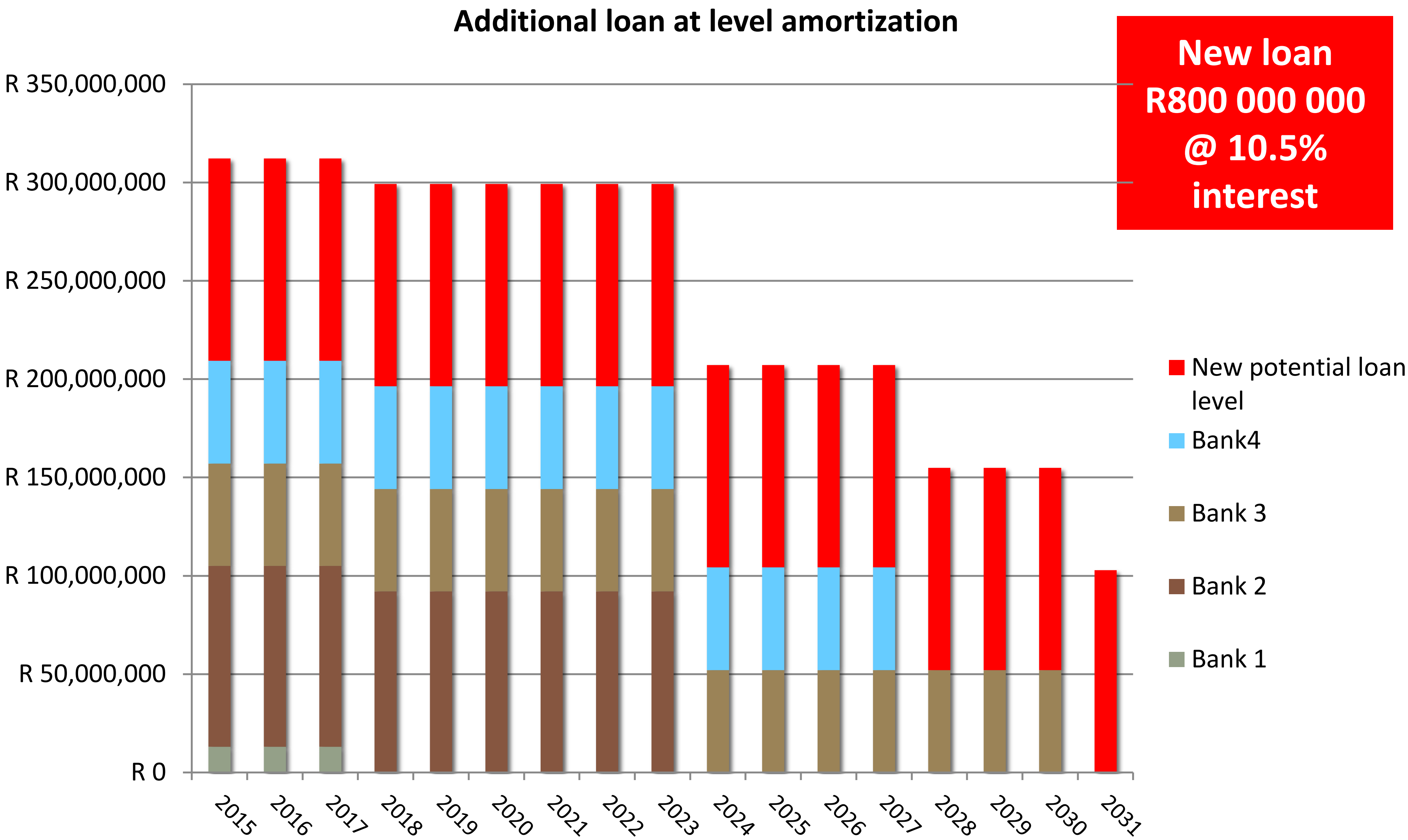
Level principal

Level payments

More on structure – a real example

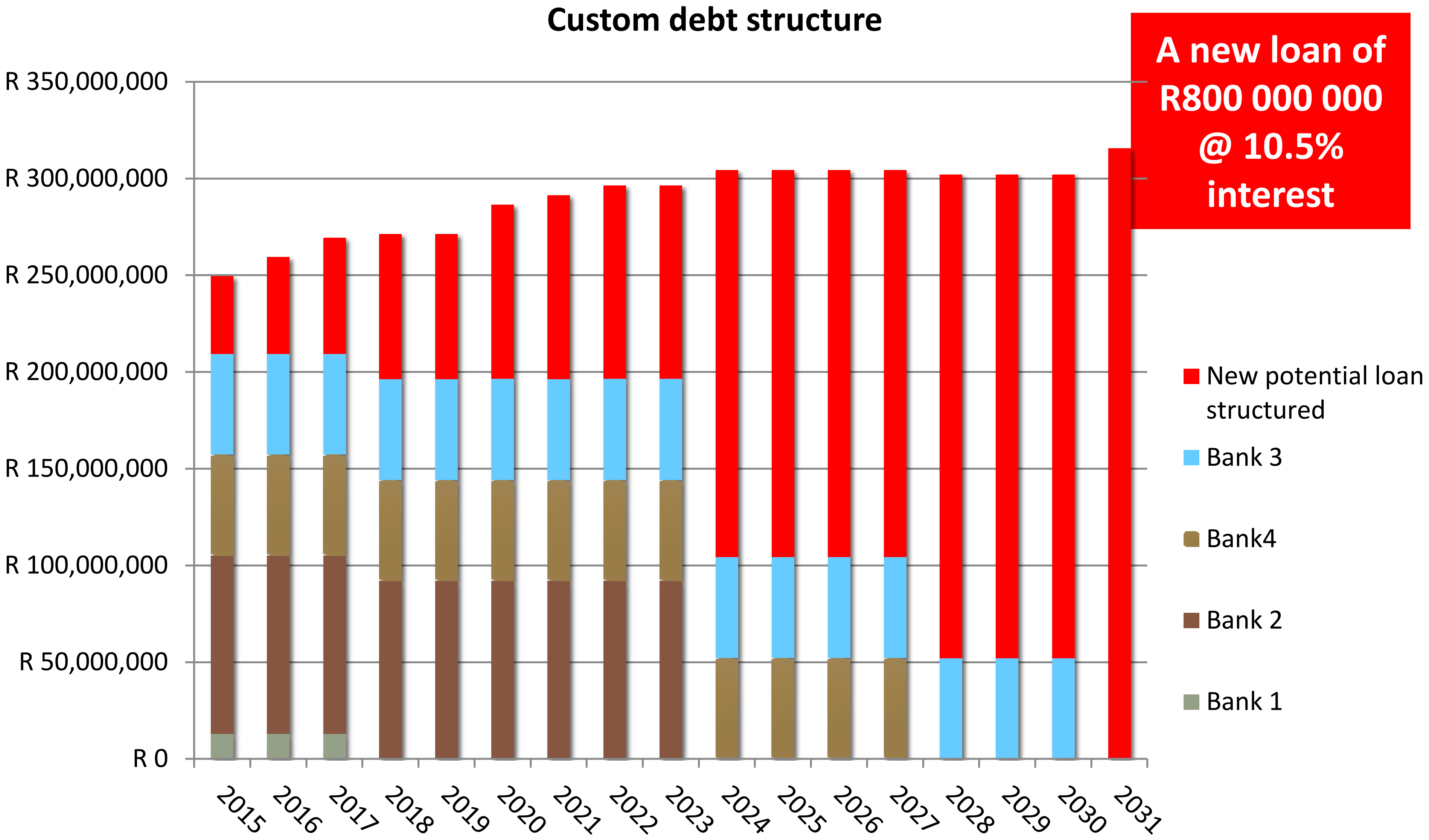


Adding another loan

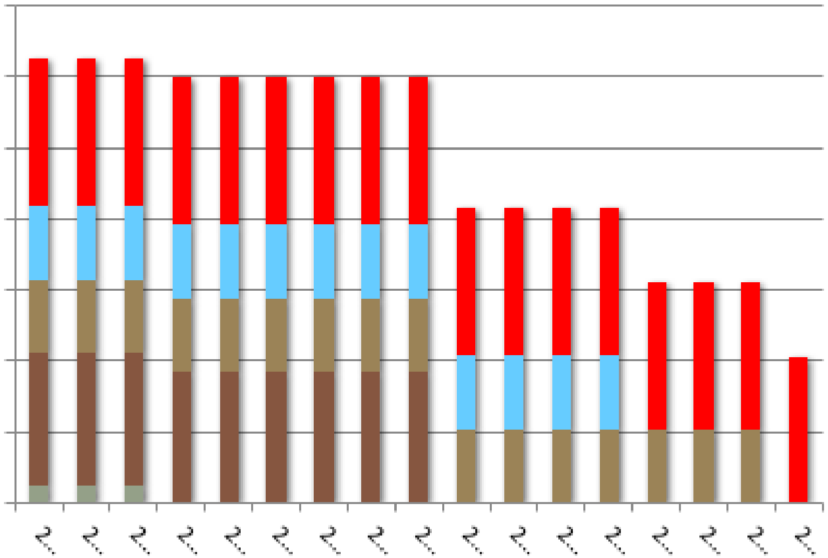


New loan R800 000 000 @ 10.5% interest

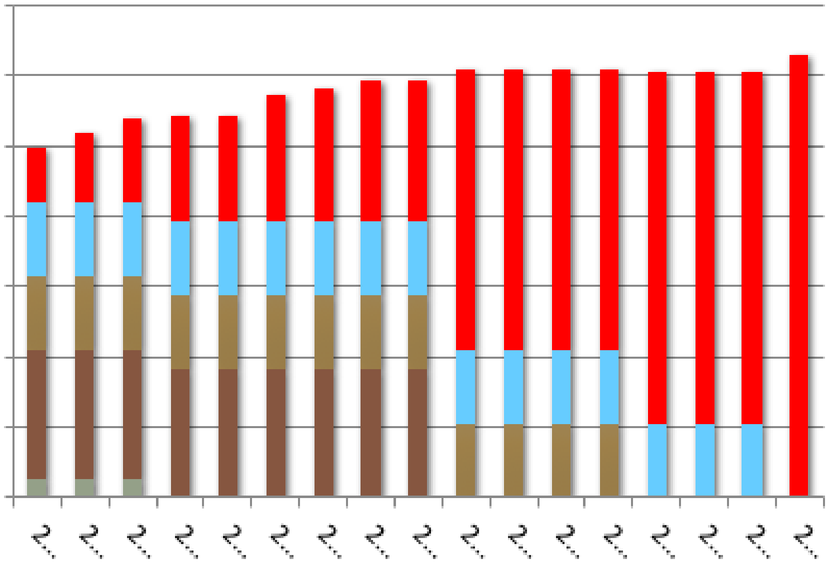
Same amount, term and interest rate



Which do you prefer, why?



New loan level



New loan custom

Borrowing wisely

- Knowledge is power
- Lenders have knowledge advantage
- Municipalities must be smart