Funding the Green Transition with Public Banks

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Public Banking Institute

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US public banking action 2019

2018: The Year of the Public Bank
Cities and states around the country have new legislation to create Public Banks
AB 857: chartering public banks

- Established legality of municipal public banks
- Set out requirements, allaying risk
- Showed widespread support:
  - Grassroots – CA Public Banking Alliance, joining volunteer activitists of 10+ cities
  - Endorsed by 183 organizations including CA Democratic Party
  - Passed by CA legislature
  - Signed by governor
From Occupy to Divest to Public Banks ...
... to the Green New Deal

Proposal included funding with “a combination of the Federal Reserve and a new public bank or system of regional and specialized public banks.”
AOC’s bill

“...a Green New Deal will require ... providing and leveraging, in a way that ensures that the public receives appropriate ownership stakes and returns on investment, adequate capital (including through community grants, public banks, and other public financing) ...”
“Economic prosperity and security for all” – how much can we afford?

• AOC’s GND includes 100% renewables, upgrade all existing buildings, expand high-speed rail, clean air and water for all

• Plus “economic prosperity and security for all” – jobs guarantee? Health care? UBI?
An unaffordable $93T?
(American Action Forum projections)

<table>
<thead>
<tr>
<th>Goal</th>
<th>Estimated Cost</th>
<th>Estimated Cost Per Household</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-carbon Electricity Grid</td>
<td>$5.4 trillion</td>
<td>$39,000</td>
</tr>
<tr>
<td>Net Zero Emissions Transportation System</td>
<td>$1.3 trillion to $2.7 trillion</td>
<td>$9,000 to $20,000</td>
</tr>
<tr>
<td>Guaranteed Jobs</td>
<td>$6.8 trillion to $44.6 trillion</td>
<td>$49,000 to $322,000</td>
</tr>
<tr>
<td>Universal Health Care</td>
<td>$36 trillion</td>
<td>$260,000</td>
</tr>
<tr>
<td>Guaranteed Green Housing</td>
<td>$1.6 trillion to $4.2 trillion</td>
<td>$4,000 to $12,000</td>
</tr>
<tr>
<td>Food Security</td>
<td>$1.5 billion</td>
<td>$10</td>
</tr>
</tbody>
</table>
The most cost-effective environmental solutions were overlooked: Project Drawdown (Hawken), 2020-2050

**Figure 2: Mitigation Impact by Sector, 2020-2050 (in gigatons of carbon dioxide-equivalent)**

<table>
<thead>
<tr>
<th>Sector</th>
<th>Total Atmospheric CO2-eq avoided (Gt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buildings and Cities</td>
<td>100</td>
</tr>
<tr>
<td>Electricity Generation</td>
<td>200</td>
</tr>
<tr>
<td>Food</td>
<td>500</td>
</tr>
<tr>
<td>Land Use</td>
<td>300</td>
</tr>
<tr>
<td>Materials</td>
<td>100</td>
</tr>
<tr>
<td>Transport</td>
<td>50</td>
</tr>
<tr>
<td>Women and Girls</td>
<td>100</td>
</tr>
</tbody>
</table>

**Sector Results by 2050**

- 321.9 gigatons reduced CO2
- $777.64 billion net implementation cost
- $10.02 trillion net operational savings

- Introduction
- Solutions
- Methodology and Integration
- Results
- Sector-Level Benchmarks
- Conclusions and Limitations
- Frequently Asked Questions
- Coming Attractions
- Additional Information

Other Sectors:
- Electricity Generation
“Food” is the clear leader.

Of the top 30 solutions, 12 are in this sector, including:

- Silvopasture
- Regenerative Agriculture
- Tropical Staple Trees
- Conservation Agriculture
- Tree Intercropping
- Managed Grazing
- Farmland Restoration
- Multistrata Agroforestry
… which makes sense because plants have been evolving carbon sequestration for hundreds of millions of years.

- Per a recent study in *Science*, a worldwide tree-planting program could remove $\frac{2}{3}$ of human carbon emissions.
- Grasslands are better carbon sinks than forests.
- Hemp is better yet.
Meanwhile factory farming, which is subsidized, is a major polluter.

- Responsible for as much as 50% of the carbon debt, counting externalities
- Toxic food injures health, increasing medical costs
- Inhumane conditions for billions of animals
Incentivizing small farmers: Divert subsidies from Big Ag to sustainable, regenerative farming.

• Big agribusinesses (factory farms and mono-crops) are now the biggest recipients of corporate welfare, at over $20B annually.
What about the big GND costs – “prosperity and economic security for all?”

We could do it all with “helicopter money.” The Fed could generate “People’s QE,” tax-free and interest-free. But wouldn’t that be inflationary?
First some review: Most money is created by banks as loans.

“[B]anks do not act simply as intermediaries, lending out deposits that savers place with them .... Commercial banks create money, in the form of bank deposits, by making new loans.... [B]ank deposits make up ... 97% of the amount [of money] currently in circulation.”

Banks create only the principal, not the interest.
Debt-at-interest always grows faster than the real economy ...
... creating the growth imperative.

Growth of Money Exceeds Growth of Real Economy

Compound Interest:

\[ FV = PV \times (1 + i)^n \]

Money = Debt

Inflation & Bubbles

Real Economy
The gap is filled with more debt.
It’s a pyramid scheme.

The chart shows how pyramid schemes can become impossible to sustain:

- More than the US Population
- More than the World Population
Credit booms lead to busts …
and periodic financial collapse, widening the wealth gap …
... and the debt-to-income gap.
The result is “debt deflation.”
How to fill the gap between debt and income?

• Simple, said Ben Bernanke: just drop money from helicopters.

• But what about inflation – too much money chasing too few goods? (The quantity theory of money.)
Not a problem if supply keeps up with demand.
Compare China: M2 grew 1800% in 23 years, yet inflation was low.
Why? China’s GDP shot up too.
Compare: Greenbacks issued in the US Civil War.

- $450M issued in 1862, doubling the money supply (equivalent to adding $15T today)
- $64M lent for transcontinental railroad
- 1869: $103M returned (60% profit)
Here too hyperinflation did not result.
But isn’t money injection possible only up to full employment?
No. Not all income is spent on consumer goods. Debt repayment and savings don’t add to demand.
And the savings rate for most US families is very low …

Source: Emmanuel Saez and Gabriel Zucman, The Distribution of U.S. Wealth, Capital
While US household debt is very high. Recall: Money going to debt repayment is extinguished with the debt.

**Average debt outstanding**

by household  
(Oct. 2018)

<table>
<thead>
<tr>
<th>Type</th>
<th>Average Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revolving Credit</td>
<td>$7,630</td>
</tr>
<tr>
<td>Student Loan Debt</td>
<td>$11,245</td>
</tr>
<tr>
<td>Vehicle Debt</td>
<td>$8,163</td>
</tr>
<tr>
<td>Mortgage Debt</td>
<td>$70,323</td>
</tr>
</tbody>
</table>

Sources: NYFRB, Federal Reserve, US Census
80% of Americans must borrow just to meet expenses.
Borrow how much? The gap between annual real disposable income and the cost of living is $15K per capita.
So assume a UBI of $12K/year.

- If 80% of recipients used it to repay their consumer debts (credit cards, student debt, medical bills, etc.), that money would disappear with the debt.
- The 20% who can meet expenses would not need to spend their UBI. Most would save it or invest it in the financial (non-consumer) markets.
- Net result: NO appreciable increase in CPI.
The money created by banks as debt would just be replaced with debt-free money created as People’s QE.
Other federal options:
(1) Restore postal banking

- Safe, popular alternative to bankrupt commercial banks, 1911-67.
- Could serve the unbanked and underbanked today.
  - 25% of households
  - Sen. Kirsten Gillibrand’s postal banking bill (2018) could avoid 400% payday loans, $40K over a lifetime paid in deposit and checking fees
(2) A federal infrastructure bank -- compare Roosevelt’s Reconstruction Finance Corp.

- $500 million capitalization
- Loaned or invested over $40 billion from 1932 to 1957
- Issued bonds, mostly bought by the Treasury
- Funded the New Deal and World War II
- Net profit to the government: $690 million
Compare: Germany’s KfW & green energy

- Half of German banking assets are in the public sector.
- Germany has been called “the world's first major energy economy“: renewables generated 41% of its electricity in 2017, up from 6% in 2000.
- KfW and the German public savings banks (Sparkassen) provided over 72% of the financing and were instrumental in the transition – both as lenders and as facilitators, coordinating stakeholders and setting up renewable energy cooperatives.
Compare: China’s public development banks

- China built 12,000 miles of high-speed rail in a decade
- World’s largest dam and power station
- How funded? The government owns most of the banks.
- Debts not repaid are written off.
And if Congress or the Fed won’t act? We can create money locally.
Money creation by public banks is sustainable, because profits return to the local economy.

The colonial Pennsylvania model:

- No taxes
- No inflation
- No government debt
25% of banks globally are publicly-owned, including the world's largest banks –

- The two largest banks by market capitalization (ICBC and China Construction Bank)
- The largest bank by deposits (Japan Post Bank)
- The largest bank by number of branches (State Bank of India)
- The largest development bank (China Development Bank).
- The world’s seven safest banks are also publicly-owned, leading with KfW, Germany’s public development bank.
Public banks avert banking crises by lending counter-cyclically.

**Credit from Public and Private Banks from December 2008 to September 2009 in %**

- **Argentina**: Public Banks 1.5%, Private Banks -1.8%
- **Brasil**: Public Banks 17.1%, Private Banks -1.8%
- **Chile**: Public Banks 20.0%, Private Banks -6.3%
- **Colombia**: Public Banks 18.6%, Private Banks -3.3%
- **Costa Rica**: Public Banks 7.7%, Private Banks -4.1%
- **México**: Public Banks 0.7%, Private Banks -3.8%
- **Perú**: Public Banks 7.4%, Private Banks -2.3%
- **Uruguay**: Public Banks 2.2%, Private Banks -7.6%

*Source: CEPAL*
Public banks are the heavy hitters in climate finance.

- They control 20% of assets globally but contribute nearly 50% of climate finance.
- “Private finance has no appetite for saving the planet without first feeding insatiable shareholders.” – Thomas Marois, Univ. of London
Recent studies show that public banks are also:

• Safer.
• Less corrupt.
• More profitable.
• Avert banking crises by lending countercyclically.
• Serve local economies rather than private investors.
In the US, we have only one state-owned depository bank — in North Dakota — but it’s a stellar model.

- ND was the only state to escape the 2008-09 credit crisis
- The nation’s lowest unemployment rate
- Lowest default rate
- Most banks per capita
North Dakota has had its own bank since 1919.

- The farmers were losing their farms to the Wall Street bankers.
- They organized, won an election, and passed legislation.
“It is more profitable than Goldman Sachs Group Inc., has a better credit rating than J.P. Morgan Chase & Co. and hasn’t seen profit growth drop since 2003. Meet Bank of North Dakota, the U.S.’s lone state-owned bank, which has one branch, no automated teller machines and not a single investment banker. . . . Return on equity . . . is 18.56%, about 70% higher than those at Goldman Sachs and J.P. Morgan.”
Not due to oil: The BND has had record profits for 15 years despite a massive oil bust.

- Spring 2019 annual report showed:
  - total assets: $7 billion
  - capital: $861 million
  - return on equity: 18%.
Why so profitable?

- No private shareholders.
- No bonuses, fees, commissions.
- No high-paid CEOs.
- No advertising.
- Massive deposit base – all state revenues.
- Partners with local banks, which act as the front office. No need for branches or ATMs.
- Savings are passed on to borrowers and communities.
Local German public banks also outperform private banks

2015 report comparing private German commercial banks with public savings banks (Sparkassen), regional banks and credit unions:

Total deposits and loans are about the same. Yet private banks are less profitable and pay less than half the taxes.

Bonn, January 2015
Policymakers ask: Why do we need *publicly-owned* banks?

• We already have lots of banks, and governments have loan funds.
• The difference is leverage -- $1 of capital can fund $10 in bank loans.
• Private banks can leverage but are costly.
The high cost of private finance

- School districts are paying over 3x principal on Capital Appreciation Bonds.
- Debt-strapped governments wind up privatizing public assets, which means high user fees and tolls.
Bank fees are another huge cost.

Fact Tuesday: The City of Los Angeles last year spent more on Wall Street fees than it did on our streets—it paid Wall Street $290 million in fees, spending only $163 million on the Bureau of Street Services.

Half the cost of infrastructure is interest.

**Bay Bridge retrofit:**
principal, $6 billion; interest, $6 billion.

**Bullet train:**
principal, $9.95 billion; interest, $9.5 billion
The magic of leverage -- IBank possibilities

Capital: $400M unencumbered capital
Deposits: $4B x 1% interest = $40M cost of funds
Loans: $4B less 10% = $3.9B to lend or invest:
    $3B @ 3% = $90M profit
    $.9B in required reserves @ 2% = $18M
Gross profit: $108M
    less $40M for interest
    less $41M non-interest costs (30% of profit)
Net profit: $27M = 7% ROE

Interest owed in $$ billions

State Bond Cost Estimates

<table>
<thead>
<tr>
<th>Description</th>
<th>Estimated Cost</th>
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<tbody>
<tr>
<td>Authorized new borrowing</td>
<td>$4.0 billion</td>
</tr>
<tr>
<td>Average annual cost to pay off bonds</td>
<td>$200 million</td>
</tr>
<tr>
<td>Likely repayment period</td>
<td>40 years</td>
</tr>
<tr>
<td>Source of repayment</td>
<td>General tax revenues</td>
</tr>
</tbody>
</table>

Principal

<table>
<thead>
<tr>
<th></th>
<th>$4.0B</th>
<th>$4.0B</th>
</tr>
</thead>
<tbody>
<tr>
<td>% interest</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Duration</td>
<td>40 yrs</td>
<td>30 yrs</td>
</tr>
<tr>
<td>Total interest</td>
<td>$4.00B</td>
<td>$2.16B</td>
</tr>
<tr>
<td>$$ saved</td>
<td>0</td>
<td>$1.84B</td>
</tr>
<tr>
<td>% interest saved</td>
<td>0</td>
<td>46%</td>
</tr>
</tbody>
</table>
Potential savings for California

- 100% renewables required by 2045.
- Projected cost: $350 billion.
- Projected savings if funded through public banks: $90 billion (25%) (more if the fed funds rate goes to 0).
For more information –
PublicBankingInstitute.org
EllenBrown.com