

# **C&W–Columbus Acquisition: Quantifying the Consequences for Caribbean Competition**

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Small changes in fiber capacity prices cause huge changes in retail prices.

You can't fix anything else until the fiber market is fixed, and once you fix the fiber market, the rest comes relatively easily.

## Caveat

PCH is a global organization, rather than a Caribbean organization, so there are people in this room who know far more about the state of Caribbean cable systems than we ever will. The information that follows is the best we've been able to find and confirm from multiple public sources. If you can help us to refine our understanding of the data it will help us refine our model of the Caribbean network, and that in turn will improve the quality of the insights that can be obtained from the model. We actively solicit your help to correct, refine, and expand the data we're basing the model on.

# Cable Ownership Pre-Acquisition

| Two or more owners 16 |                     |        |
|-----------------------|---------------------|--------|
| Cable System          | Caribbean Countries | Owners |
| ARCOS                 | 5                   | 19     |
| Pan-Am                | 2                   | 15     |
| Americas-II           | 4                   | 15     |
| MAYA-1                | 1                   | 11     |
| ECFS                  | 11                  | 10     |
| Antillas-1            | 2                   | 7      |
| Taino-Carib           | 1                   | 7      |
| PCCS                  | 3                   | 5      |
| Bahamas-2             | 1                   | 3      |
| ALBA-1                | 2                   | 2      |
| GCN                   | 11                  | 2      |
| BDSNi                 | 2                   | 2      |
| SGSCS                 | 1                   | 2      |
| East-West             | 3                   | 2      |
| CBUS                  | 2                   | 2      |
| Gemini-Bermuda        | 1                   | 2      |

| Monopoly 13        |                     |               |
|--------------------|---------------------|---------------|
| Cable System       | Caribbean Countries | Owners        |
| CJFS               | 2                   | Columbus      |
| CFX-1              | 1                   | Columbus      |
| Fibralink          | 3                   | Columbus      |
| EC-Link            | 2                   | Columbus      |
| Alonso de Ojeda-II | 2                   | Telefonica    |
| SAm-1              | 1                   | Telefonica    |
| GlobeNet           | 1                   | BTG Pactual   |
| AMX-1              | 2                   | América Móvil |
| Amerigo Vespucci   | 2                   | Antelecom     |
| BICS               | 1                   | C. Crossings  |
| Challenger         | 1                   | KeyTech       |
| SMPR-1             | 2                   | TeEm          |
| Alonso de Ojeda    | 2                   | SETAR         |

# Cable Ownership Post-Acquisition

## Two or more owners **13**

| Cable System | Caribbean Countries | Owners            |
|--------------|---------------------|-------------------|
| ARCOS        | 5                   | <b>C&amp;W+18</b> |
| Pan-Am       | 2                   | <b>C&amp;W+13</b> |
| Americas-II  | 4                   | <b>C&amp;W+13</b> |
| MAYA-1       | 1                   | <b>C&amp;W+10</b> |
| ECFS         | 11                  | <b>C&amp;W+8</b>  |
| Antillas-1   | 2                   | <b>C&amp;W+6</b>  |
| Taino-Carib  | 1                   | <b>C&amp;W+5</b>  |
| PCCS         | 3                   | <b>C&amp;W+4</b>  |
| Bahamas-2    | 1                   | 3                 |
| ALBA-1       | 2                   | 2                 |
| GCN          | 11                  | 2                 |
| BDSNi        | 2                   | 2                 |
| SGSCS        | 1                   | 2                 |

## Monopoly **16**

| Cable System       | Caribbean Countries | Owners         |
|--------------------|---------------------|----------------|
| CJFS               | 2                   | <b>C&amp;W</b> |
| CFX-1              | 1                   | <b>C&amp;W</b> |
| Fibralink          | 3                   | <b>C&amp;W</b> |
| EC-Link            | 2                   | <b>C&amp;W</b> |
| East-West          | 3                   | <b>C&amp;W</b> |
| CBUS               | 2                   | <b>C&amp;W</b> |
| Gemini-Bermuda     | 1                   | <b>C&amp;W</b> |
| Alonso de Ojeda-II | 2                   | Telefonica     |
| SAm-1              | 1                   | Telefonica     |
| GlobeNet           | 1                   | BTG Pactual    |
| AMX-1              | 2                   | América Móvil  |
| Amerigo Vespucci   | 2                   | Antelecom      |
| BICS               | 1                   | C. Crossings   |
| Challenger         | 1                   | KeyTech        |
| SMPR-1             | 2                   | TeEm           |
| Alonso de Ojeda    | 2                   | SETAR          |

Connectivity is disproportionately dependent upon a central subset of cables,



Connectivity is disproportionately dependent upon a central subset of cables, and those cables are disproportionately involved in the acquisition.





# Is Digicel a Competitor to C&W?

Cable & Wireless claims that it will be smaller than Digicel, and therefore its acquisition does not threaten competition.

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This claim is based solely on Digicel's retail mobile business.





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This claim is based solely on Digicel's retail mobile business.

Digicel's sole fiber holdings are a majority interest in the GCN system in the eastern Caribbean, which does not reach the mainland. By comparison, C&W and Columbus own most of the Caribbean cable systems, either in part or as outright monopolies.

C&W is far larger than Digicel in undersea cable systems, upon which all of the other businesses are based and wholly dependent, as well as cable TV, residential, and commercial broadband.

Digicel or any other competitor in the retail space will be gated by C&W's dominance over backhaul.



# Is Digicel a Competitor to C&W?

Brendan Paddick described competing with C&W in 2007:

“We’re only interested in building retail operations where we can control our own off-island connectivity and not be held captive. When we’ve been reliant on purchasing bandwidth from a competitor, it’s put us in a tough position. Costs may be kept too high, and we’re not the highest on the priority list in case of a system problem. The agility and nimbleness of having our own off-island network is an advantage. We will only enter a market if we can secure our own off-island bandwidth”

Source: April 2007 interview with *Caribbean Telecoms Analyst*

# Country Details

# Anguilla

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |

Anguilla is currently served only by the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus. ECFS does not reach any intercontinental cable landings, so connectivity from Anguilla outside the Caribbean is achieved by pairing ECFS with Americas-II (14 owners, including both C&W and Columbus).

Impact: Reduced competition, probably minor, but we need ownership share information to quantify the effect.

# Antigua & Barbuda

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

Antigua & Barbuda is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.

# Aruba

| Cable System       | Countries | Ownership |          |                 |
|--------------------|-----------|-----------|----------|-----------------|
| Alonso de Ojeda    | 1         |           |          | Telefonica      |
| Alonso de Ojeda-II | 1         |           |          |                 |
| Pan-Am             | 8 (US)    | C&W       | Columbus | 13 Other Owners |
| PCCS               | 6 (US)    |           |          | 4 Other Owners  |

Aruba is currently served by four cable systems, two of which are Telefonica-owned cables to Curaçao, and two of which, GCN and PCCS, are major consortium-owned cables that reach intercontinental cable landings in the US. C&W is an owner in both consortium cables, and Columbus in Pan-Am.

Impact: Some impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information. No impact on connections to Curaçao.

# Bahamas

| Cable System | Countries | Ownership |          |                     |
|--------------|-----------|-----------|----------|---------------------|
| ARCOS        | 14 (US)   |           | Columbus | 18 Other Owners     |
| BDSNi        | 1         | C&W       |          | 1 Other Owner       |
| Bahamas-2    | 1 (US)    |           |          | 3 Owners            |
| BICS         | 1 (US)    |           |          | Caribbean Crossings |

The Bahamas are currently served by four cable systems, two of which, BICS and Bahamas-2, go directly to intercontinental cable landings in the US. Bahamas Domestic Submarine Network (BDSNi) goes directly to Haiti, and ARCOS is a major consortium cable that reaches fourteen other countries including the US.

Impact: Little or no impact on out-of-region connectivity. Reduced competition in Caribbean regional connectivity, impossible to quantify without ownership share information. No impact on connections to Haiti.

# Barbados

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

Barbados is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.

# Bermuda

| Cable System   | Countries   | Ownership   |          |
|----------------|-------------|-------------|----------|
| CBUS           | 1           | C&W         | Columbus |
| Gemini Bermuda | 1 (US)      |             |          |
| GlobeNet       | 4 (US & BR) | BTG Pactual |          |
| Bermuda-US     | 1 (US)      |             |          |
| CB-1           | 1 (US)      |             |          |

Bermuda is currently served by five cable systems, three of which, Gemini, Bermuda-US, and CB-1, go directly to intercontinental cable landings in the US. GlobeNet reaches intercontinental cables in both the US and Brazil. The fifth, CBUS, goes directly to BVI.

Impact: After merger, all five of Bermuda's cables will be monopoly-held, by only three companies in total: two of them by C&W, and two by BTG Pactual.



# British Virgin Islands

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| PCCS         | 6 (US)    | C&W       | Columbus | 4 Other Owners |
| East-West    | 2         |           |          |                |
| CBUS         | 1         |           |          |                |

BVI is currently served by three cable systems, and both C&W and Columbus have shares in all three. One, PCCS, also has four other owners, and reaches intercontinental cable landings in the US.

Impact: Major reduction in competition on both regional and intercontinental paths.

# Cayman Islands

| Cable System | Countries | Ownership |          |                 |
|--------------|-----------|-----------|----------|-----------------|
| Maya-1       | 6 (US)    | C&W       | Columbus | 10 Other Owners |
| CJFS         | 1         |           |          |                 |

The Cayman Islands are currently served by two cable systems: Maya-1 reaches intercontinental cable landings in the US and has eleven owners. Cayman-Jamaica Fiber System (CJFS) is a C&W monopoly cable to Jamaica.

Impact: Reduced competition in intercontinental connectivity, impossible to quantify without ownership share information. The Caymans' only Caribbean connectivity is to Jamaica, which remains a monopoly.

# Cuba

| Cable System | Countries | Ownership |
|--------------|-----------|-----------|
| ALBA-1       | 2         | 2 Owners  |

Cuba is currently served by one cable, ALBA-1, which reaches Venezuela and Jamaica, and is owned by Transbit and Telecom Venezuela.

Impact: No change in regional connectivity, since Cuba is only connected to Jamaica, and the ALBA-1 cable doesn't change ownership, but the intercontinental connectivity is dependent upon Jamaica and Venezuela, and Jamaica is hit very hard by this merger.

# Curaçao

| Cable System       | Countries   | Ownership |          |                 |
|--------------------|-------------|-----------|----------|-----------------|
| ARCOS              | 14 (US)     |           |          | 18 Other Owners |
| Americas-II        | 7 (US & BR) | C&W       | Columbus | 13 Other Owners |
| ECLink             | 1           |           |          |                 |
| Alonso de Ojeda    | 1           |           |          | Telefonica      |
| Alonso de Ojeda-II | 1           |           |          |                 |
| Amerigo Vespucci   | 1           |           |          | Antelecom       |

Curaçao is currently served by six cable systems, two of which are major consortium cables reaching the US and Brazil, with C&W and Columbus partial ownership, and four of which are smaller monopoly cables to individual countries.

Impact: Reduced competition in both intercontinental and Caribbean regional connectivity, impossible to quantify without ownership share information. No impact on connections to Aruba.

# Dominica

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

Dominica is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.

# Dominican Republic

| Cable System | Countries   | Ownership |                 |
|--------------|-------------|-----------|-----------------|
| ARCOS        | 14 (US)     | Columbus  | 18 Other Owners |
| Antillas 1   | 1           |           | 6 Other Owners  |
| Fibralink    | 2           |           |                 |
| East-West    | 2           | C&W       |                 |
| AMX-1        | 6 (US & BR) |           | América Móvil   |

The Dominican Republic is currently served by five cable systems, two of which, ARCOS and AMX-1, reach intercontinental cable landings in the US, and one of those is an América Móvil monopoly cable.

Impact: After merger, two of DR's five cables will be partly C&W owned, and two will be C&W monopoly-held, while the fifth will remain an América Móvil monopoly.

# Grenada

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

Grenada is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.

# Guadeloupe

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

Guadeloupe is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.



# Haiti

| Cable System | Countries | Ownership |          |               |
|--------------|-----------|-----------|----------|---------------|
| Fibralink    | 2         |           | Columbus |               |
| BDSNi        | 1         | C&W       |          | 1 Other Owner |

Haiti is currently served by two cable systems: Fibralink, a Columbus monopoly cable that connects it to the Dominican Republic and Jamaica, and BDSNi, a two-owner cable that connects it to the Bahamas.

Impact: Haiti is not connected to any cables that reach intercontinental landing points directly, and within the Caribbean, it's only connected to DR, Jamaica, and the Bahamas, so its intercontinental connectivity is dependent upon two-hop connections through those three countries. Jamaica and DR will both be hard-hit by the merger, which means that Haiti's only remaining competitive path to the rest of the world will be through the Bahamas.

# Jamaica

| Cable System | Countries | Ownership |          |
|--------------|-----------|-----------|----------|
| CFX-1        | 2 (US)    | Columbus  |          |
| Fibralink    | 2         |           |          |
| East-West    | 2         | C&W       |          |
| CJFS         | 1         |           |          |
| ALBA-1       | 2         |           | 2 Owners |

Jamaica is currently served by five cables, one of which, a Columbus monopoly cable, reaches intercontinental cable landings in the US directly.

Impact: Jamaica is the hardest-hit of any country. Four of Jamaica's five cables will now be under C&W monopoly control, including the one that reaches intercontinental cables in Miami. The fifth cable only reaches Cuba and Venezuela.

# Martinique

| Cable System | Countries   | Ownership |          |                 |
|--------------|-------------|-----------|----------|-----------------|
| Americas-II  | 7 (US & BR) | C&W       | Columbus | 13 Other Owners |
| ECFS         | 12          |           |          | 8 Other Owners  |
| GCN          | 11          |           |          | 2 Owners        |

Martinique is currently served by three cable systems, and both C&W and Columbus have shares in two of them. Two of the systems reach intercontinental cable landings in the US.

Impact: Minor reduction in competition on both regional and intercontinental paths, impossible to quantify without ownership share information.

# Montserrat

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |

Montserrat is currently served only by the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus. ECFS does not reach any intercontinental cable landings, so connectivity from Montserrat outside the Caribbean is achieved by pairing ECFS with Americas-II (14 owners, including both C&W and Columbus).

Impact: Reduced competition, probably minor, but we need ownership share information to quantify the effect.

# Puerto Rico

| Cable System | Countries   | Ownership |          |                 |
|--------------|-------------|-----------|----------|-----------------|
| ARCOS        | 14 (US)     | C&W       | Columbus | 18 Other Owners |
| Americas-II  | 7 (US & BR) |           |          | 13 Other Owners |
| PCCS         | 6 (US)      |           |          | 4 Other Owners  |
| Taino-Carib  | 1 (US)      |           |          | 5 Other Owners  |
| Antillas 1   | 1           |           |          | 6 Other Owners  |
| GCN          | 11          |           |          | 2 Owners        |
| SAm-1        | 8 (US & BR) |           |          | Telefonica      |
| AMX-1        | 6 (US & BR) |           |          | América Móvil   |
| SMPR-1       | 1           |           |          | TelEm           |

Puerto Rico is served by nine cable systems, five of which are consortium, seven reach intercontinental landings in the US, and three in Brazil.

Impact: Although C&W will have stakes in five of the cables, there will likely be little significant reduction in competition.

# St. Kitts & Nevis

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

St. Kitts & Nevis are currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.

# St. Lucia

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

St. Lucia is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.

# St. Vincent and the Grenadines

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| GCN          | 11        |           |          | 2 Owners       |

St. Vincent and the Grenadines are currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and the Global Caribbean Network (GCN), which has two owners, Leucadia National Corporation and Digicel. Connectivity outside the Caribbean is achieved by pairing ECFS with Americas-II or GCN with any of six cable systems that connect Puerto Rico to the US.

Impact: Minor impact on out-of-region and Caribbean regional connectivity, impossible to quantify without ownership share information.



# St. Maarten

| Cable System | Countries | Ownership |          |                |
|--------------|-----------|-----------|----------|----------------|
| ECFS         | 12        | C&W       | Columbus | 8 Other Owners |
| SMPR-1       | 1         |           |          | TelEm          |

St. Maarten is currently served by two cable systems: the Eastern Caribbean Fiber System (ECFS), which has ten owners, including both C&W and Columbus, and SMPR-1, which goes solely to Puerto Rico. Neither of these reach any intercontinental cable landings, so connectivity from Sint Maarten outside the Caribbean is achieved by pairing ECFS with any of six cable systems that connect Puerto Rico to the United States.

Impact: Very minor reduction in competition both within the Caribbean and intercontinentally.

# Trinidad & Tobago

| Cable System | Countries   | Ownership |          |                 |
|--------------|-------------|-----------|----------|-----------------|
| ECFS         | 12          | C&W       | Columbus | 8 Other Owners  |
| Americas-II  | 7 (US & BR) |           |          | 13 Other Owners |
| ECLink       | 1           |           |          |                 |
| GCN          | 11          |           |          | 2 Owners        |
| SG-SCS       | 2           |           |          | 2 Owners        |

Trinidad & Tobago is served by five cable systems, two of which are major consortium cables, both with C&W and Columbus partial ownership, two reaching the US, and one reaching Brazil.

Impact: Minor reduction in competition in both intercontinental and Caribbean regional connectivity, impossible to quantify without ownership share information. No impact on connections to Suriname or Guyana.

# Turks & Caicos

| Cable System | Countries | Ownership                   |
|--------------|-----------|-----------------------------|
| ARCOS        | 14 (US)   | Columbus<br>18 Other Owners |

Turks & Caicos are served by only one cable system, but it's a major consortium cable that reaches intercontinental landings in the US. It does not have significant connectivity to other Caribbean nations, however.

Impact: Minor reduction in competition in both intercontinental and Caribbean regional connectivity, impossible to quantify without ownership share information.

# US Virgin Islands

| Cable System | Countries | Ownership |          |                 |
|--------------|-----------|-----------|----------|-----------------|
| Pan-Am       | 8 (US)    | C&W       | Columbus | 13 Other Owners |

The U.S. Virgin Islands are served by only one cable system, but it's a major consortium cable that reaches intercontinental landings in the US. Within the Caribbean, however, it connects only to Aruba.

Impact: Minor reduction in competition in both intercontinental and Caribbean regional connectivity, impossible to quantify without ownership share information.

# Degraded Competition Summary

| Country                | Intercontinental Impact | Regional Impact |
|------------------------|-------------------------|-----------------|
| Anguilla               | Minor                   | Minor           |
| Antigua & Barbuda      | Minor                   | Minor           |
| Aruba                  | Minor                   | Minor           |
| Bahamas                | None                    | Minor           |
| Barbados               | Minor                   | Minor           |
| Bermuda                | Major                   | Major           |
| British Virgin Islands | Major                   | Major           |
| Cayman Islands         | Moderate                | None            |
| Cuba                   | Major                   | None            |
| Curaçao                | Minor                   | Minor           |
| Dominica               | Minor                   | Minor           |
| Dominican Republic     | Moderate                | Major           |
| Grenada                | Minor                   | Minor           |

# Degraded Competition Summary

| Country                      | Intercontinental Impact | Regional Impact |
|------------------------------|-------------------------|-----------------|
| Guadeloupe                   | Minor                   | Minor           |
| Haiti                        | Moderate                | Moderate        |
| Jamaica                      | Critical                | Critical        |
| Martinique                   | Minor                   | Minor           |
| Montserrat                   | Minor                   | Minor           |
| Puerto Rico                  | Minor                   | Minor           |
| St. Kitts & Nevis            | Minor                   | Minor           |
| St. Lucia                    | Minor                   | Minor           |
| St. Vincent & the Grenadines | Minor                   | Minor           |
| Sint Maarten                 | Minor                   | Minor           |
| Trinidad & Tobago            | Minor                   | Minor           |
| Turks & Caicos               | Minor                   | Minor           |
| US Virgin Islands            | Minor                   | Minor           |

# Demographic and Economic Effect

Goal: Gain a Caribbean regional overview by normalizing to per-person and per-dollar effect across all the Caribbean islands, while still identifying the effect on a per-island basis.

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**Where will the largest number of people be at risk, and which economies stand to lose the most** in absolute terms?

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Very simple analysis:

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Very simple analysis:

Grade degradation of competition 0 through 4

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Very simple analysis:

- Grade degradation of competition 0 through 4

- Weight intercontinental and regional effect equally

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**Where will the largest number of people be at risk, and which economies stand to lose the most** in absolute terms?

Very simple analysis:

- Grade degradation of competition 0 through 4

- Weight intercontinental and regional effect equally

- Multiply by population and GDP

# Demographic and Economic Effect

Goal: Gain a Caribbean regional overview by normalizing to per-person and per-dollar effect across all the Caribbean islands, while still identifying the effect on a per-island basis.

**Where will the largest number of people be at risk, and which economies stand to lose the most** in absolute terms?

Very simple analysis:

- Grade degradation of competition 0 through 4

- Weight intercontinental and regional effect equally

- Multiply by population and GDP

- Normalize to 100 in each category

# Demographic and Economic Effect

| Country                | Intercont | Regional | Population | Economy |
|------------------------|-----------|----------|------------|---------|
| Anguilla               | Minor     | Minor    | 0          | 0       |
| Antigua & Barbuda      | Minor     | Minor    | 0          | 0       |
| Aruba                  | Minor     | Minor    | 0          | 1       |
| Bahamas                | None      | Minor    | 1          | 2       |
| Barbados               | Minor     | Minor    | 1          | 1       |
| Bermuda                | Major     | Major    | 1          | 7       |
| British Virgin Islands | Major     | Major    | 0          | 1       |
| Cayman Islands         | Moderate  | None     | 0          | 0       |
| Cuba                   | Major     | None     | 65         | 4       |
| Curaçao                | Minor     | Minor    | 1          | 1       |
| Dominica               | Minor     | Minor    | 0          | 0       |
| Dominican Republic     | Moderate  | Major    | 100        | 100     |
| Grenada                | Minor     | Minor    | 0          | 0       |

# Demographic and Economic Effect

| Country                      | Intercont | Regional | Population | Economy |
|------------------------------|-----------|----------|------------|---------|
| Guadeloupe                   | Minor     | Minor    | 1          | 2       |
| Haiti                        | Moderate  | Moderate | 42         | 5       |
| Jamaica                      | Critical  | Critical | 42         | 42      |
| Martinique                   | Minor     | Minor    | 1          | 4       |
| Montserrat                   | Minor     | Minor    | 0          | 0       |
| Puerto Rico                  | Minor     | Minor    | 14         | 44      |
| St. Kitts & Nevis            | Minor     | Minor    | 0          | 0       |
| St. Lucia                    | Minor     | Minor    | 0          | 0       |
| St. Vincent & the Grenadines | Minor     | Minor    | 0          | 0       |
| Sint Maarten                 | Minor     | Minor    | 0          | 1       |
| Trinidad & Tobago            | Minor     | Minor    | 5          | 12      |
| Turks & Caicos               | Minor     | Minor    | 0          | 0       |
| US Virgin Islands            | Minor     | Minor    | 0          | 1       |



# Where do we go from here?

Data:

Ownership shares of cable systems

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- Available remaining capacity
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## Analysis:

- How great is the ownership concentration on critical cables?
- How much competition remains on unsold capacity?

**Where should new cables be built to most improve competition at the lowest cost?**

# Where do we go from here?

## Regulatory Goals:

Protect the interests of the public; telecom consumers



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## Regulatory Goals:

Protect the interests of the public; telecom consumers

Regulatory harmonization and cooperation across the region

Transaction transparency for market-dominant operators

Guide governments to cost-effective national investment

# Thanks, and Questions?

Copies of this presentation can be found  
in Keynote and PDF formats at:

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