

A ]b]Uhi f!K i bXYf`UbX`]b`< Ua Vi f[ .  
6Y`]YVhYghY`5hhfU\_h]cb`ZØf`Hci f]ghYb`°

8 Ug`A ]b]Uhi f!K i bXYf`UbX`]b`< Ua Vi f[ `k i fXY`YfbYi`h`ni f  
VY`]YVhYghYb`GY`Ybgk ØfX][`\_Y]h`]b`8Yi hgW`UbX`[ Yk Å`hž  
bUW`Y]bYf`i a ZFU[ Y`j cb`Hci f]ghYb`"

8]Y`K U`ni f`VYghYb`Hci f]ghYbUhhfU\_h]cb`8Yi hgW`UbXg`nY][`h`XYb  
VYgcbXYfYb`D`Uhn`XYg`A ]b]Uhi f!K i bXYf`UbXg`]b`XYf`  
]bhYfbUh]cbU`Yb`K U`fbY`a i b[ "8]YgYg`VY`]YVhY`N]Y`]b`< Ua Vi f[  
ghY`h`bi b`ni a`gYW`ghYb`A U`]b`i c`[ Y`Ub`XYf`Gd]hnY`i bX`Y`[ h  
Y]bXfi W\_gj c`XUfž`k ]Y`gY]h`&\$\$\$Y]bY`Yb[ U[ ]YfhY`7ca a i b]hm  
`]bhYf`XYf`9bhk ]W`i b[ `X]YgYf`5hhfU\_h]cb`ghY`h`"

8]Y`i a ZFU[ Y`i bX`]\fY`6YXYi hi b[

J cb`A Åfn`V]g`ž`]`&\$\$&(`bU`a Yb`fi bX`&) "\$\$\$`A YbgW`Yb`Ui g  
j YfgW`]YXYbYb`@ÅbXYfb`Ub`Y]bYf`C b`]bY`! i a ZFU[ Y`XYf`8Yi hgW`Yb  
NYbhfU`Y`ZØf`Hci f]ga i g`fB NHĚ`hY]"8]YgY`5Vgh]a a i b[ `n]Y`h`XUfUi Z  
UVž`X]Y`VYgcbXYfg`Ya dZY`Ybgk YfhYb`hci f]gh]gW`Yb`N]Y`Y`]b  
8Yi hgW`UbX`ni`YfZUggYb`"8 Ug`A ]b]Uhi f!K i bXYf`UbX`Yfn]Y`hY  
XUVY]`XYb`YfghYb`D`Uhnž`k Å`fYbX`XYf`9i fcdUdUf`\_]b`Fi gh`i bX`XUg  
D`UbhUg]U`UbX`]b`6fØ`X]Y`bÅW`ghYb`D`ÅhnY`VY`Y`[ hYb`"9g`]gh  
VYa Yf`Ybgk Yfhž`k ]Y`hci f]gh]gW`Y`5hhfU\_h]cbYb`Xi fW`gc`W`Y  
F Ub\_]b[ g`Ub`G]W`hVUf`\_Y]h`[ Yk ]bbYb`i bX`gca ]h`ni f`i: ØfXYfi b[ `XYg  
F Y]gYj Yf`\_Y`fg`VY]hfU[ Yb`"

7ca a i b]hm`i bX`9b[ U[ Ya Ybh

8]Y`i: fØbXYf`XYg`A ]b]Uhi f!K i bXYf`UbXgž: fYXYf]\_`i bX`i: Yff]h  
6fUi bž`UVYb`a ]h`]\fYa`DUfhbYf`]a`š\`f`&\$\$\$Y]bY`5hhfU\_h]cb`]b  
XYf`i B9G7C![ YgW`ØhnhYb`GdY]W`YfghUXh`]bg`@VYb`[ Yfi ZYb`"8Yf

Ghc`n`XYf'; f0bXYf'0VYf`X]Y`YfbYi hY`5i gnY]W`bi b[ `nY][ hž`k ]Y  
k ]W`h][ `XUg'9b[ U[ Ya Ybh`XYg'[ YgUa hYb`HYUa g`]gh" ` 8]Y  
6Ygh`h][ i b[ `Z0f`U`X]Y` \UfhY`5fVY]h'i bX`XUg`<YfnV`i hž`XUg`]b`XUg  
Dfc`Y`\_h[ YghY`W`\_h`k ]fXž`]gh`0VYfk `À`h][ YbX` ž`Yf`\_`À`fhY` : fYXYf]\_`  
6fUi b" `8]Yg`j YfXYi h`]W`hž`k ]Y`]bhYfU`\_h]j Y`9f`YVb]ggY`]b`XYf`  
: fY]nY]hVfUbW`Y`Xi fW`XYb`X]fY`\_hYb`?cbhU`\_h`ni `XYb`6Ygi W`Yfb  
VYY]bZi ggh`k YfXYb`\_`0bbYb"

## 9]b`6`]W`\_`Ui Z`XUg`F Ub`\_]b[

⇒a `U`\_hi Y`Yb`F`Ub`\_]b[ `XYf`8NH`ghY`Yb`Ui Z`XYb`\_`c`Yb`D`À`h`n`Yb  
bYVYb`XYa` `A`]b]Uhi f!K i bXYf`UbX`Ui W`X]Y`GhUXh`6Yf`]b`i bX`XUg  
GW`c`gg`B`Yi gW`k UbghY]bž`XUg`Y`XcW`bi f`Ui Z`D`Uhm`%%`UbXYhY"  
8]YgYg`9f[ YVb]g`\_`À`ggh`XUfUi Z`gW`]Y»Ybž`XUgg`X]Y`5hfhU`\_h]j ]h`h`  
]bbcj Uh]j Yf`i bX`]bhYfU`\_h]j Yf`9f`YVb]ggY`]a` `J`Yf[ `Y]W`ni  
hfUX]h]cbY`Yb`GY`Yb`gk 0fX][ \_Y]hYb`a` 0[ `]W`Yfk`Y]gY`k`À`W`gh" `8`Ug  
nY][ h`g]W`b]W`h`ni `Y`h`h`]b`XYf`9f`\_`À`fi b[ `j`cb` : fYXYf]\_`6fUi bž`XUgg  
XYf`Ni`gd`fi W`XYf`6Ygi W`Yf`h]YZ`VYf0`fh`i bX`j ]Y`5bhf]YV`Z0f`X]Y  
Ni`\_i bZi[ ]Vh"

## 9]bY`F`Y]gY`b`UW`<`Ua`Vi`f[

8`Ug`A`]b]Uhi f!K i bXYf`UbX`]gh`b]W`h`bi f`Y]bY`A`cXY`VU`b!  
5hfhU`\_h]cbž`gcbXYfb`V]YhYh`Y]bY`XYhU][`YhfYi`Y`A`]b]Uhi fk`Y`h`a` ]h  
j`YfgW`]YXYbYb`GnYbUf]Ybž`k`Ug`Yg`Z0f`j ]Y`Y`6Ygi W`Yf`ni`Y]bYa  
i`bj`Yf[`Ygg`]W`Yb`9f`YVb]g`a`UW`h" `8`Ug`\_`c`Y`F`Ub`\_]b[ `XYf  
<`Ua`Vi`f[`Yf`5hfhU`\_h]cb`\_`0bbhY`X`Uni`VY]hfU[`Ybž`XUgg`]a`a`Yf`a`Y`f`  
Hci`f]ghYb`X]Y`GhUXh`VYgi`W`Yb`ž`k`Ug`k ]YXYfi`a`d`cg]h]j`Y  
5i`gk ]f`\_i b[`Yb`Ui`Z`X]Y`c`\_`U`Y`K`]fhgW`UZh`\`Uh"

⇒bg[ YgUa`h`fYZY`\_h]Yfh`X]YgY`5i`gnY]W`bi`b[ `b]W`h`bi`f`XYb`9fZc`[  
XYg`A`]b]Uhi f!K i bXYf`UbXgž`gcbXYfb`Ui`W`Y]bYb`HfYbXž`]b`XYa  
]bbcj Uh]j Y`9f`YVb]ggY`i bX`X]Y`9]bVYn]Y`i b[ `XYg`Di`V`\_]i`a`g  
ni`bY`a`YbX`Ub`6YXYi`hi`b[ `[`Yk`]bbYb" `8`Yf`9fZc`[ `X]YgYf  
5hfhU`\_h]cb`\_`0bbhY`U`g`5bfY]n`Z0f`UbXYfY`h`ci`f]gh]gW`Y`N]Y`Y`X]YbYbž  
]\fY`5b[`YVchY`\_fYUh]j`Yf`ni`[`YghU`hYbž`i`a`bcW`a`Y`f`6Ygi`W`Yf  
Ubni`n]Y`Yb"

8YhU]g

6Ygi W\Yb`G]Y`i bg`Ui Z.`b!U[ "XY