

8 Ua dZgdY_hU_Y`VY[Y]ghYfh
9]gYbVU\bZUbg`VY]a`<Y]n\Ui gZYgh`]b
<]`VYfgXcfZ

9f`YVYb`G]Y`XUg`gdUbbYbXY`8 Ua dZgdY_hU_Y`VY]a
<Y]n\Ui gZYgh`]b`<]`VYfgXcfZ`DUfU`Y`ZU\fh`a`]h`\]ghcf]gWXYb
8 Ua dZc_g`VY[Y]ghYfh`HYW`b]_ZUbg"

8 Ug`9]gYbVU\ba`i`gYi`a`<]`VYfgXcfZ]`Yfk`UbXY`hY`g]W`Ua
j`Yf[`Ub[`YbYb`k`c`WXYbYbXY`]b`Y]bYb`k`U\`fYb`5bn]Y\i`b[`gdi`b_h`Z0f
9]gYbVU\bZUbg"8`cfh`ZUbx`XUg`" %"<Y]n\Ui gZYgh`ghUhh`XUg`Ui`W`]b
XYb`i`a``Y[`YbXYb`;`YV]YhYb`ž`k`]Y`:`0\`Už`Z0f`6Y[Y]ghYfi`b[`gc`f[`hY"
8]Y`J`YfUbghU`hi`b[`nc[`nU\`fY]WXY`HYW`b]_VY[Y]ghYfhY`Ub`ž`X]Y`X]Y
;`Y`Y[`Yb\Y]h`i`bi`hnhYb`ž`Y]b`Y]bXfi`W_gj`c`Yg`8 Ua dZgdY_hU_Y`ni
Yf`YVYb"

6YgcbXYfg`VYa`Yf_Ybgk`Yfh`k`Uf`X]Y`DUfU`Y`ZU\fh`nk`Y]Yf
8 Ua dZc_ca`ch]j`Yb`ž`X]Y`nk`]gWXYb`:`0\`U`i`bX`:`fY]VYf[`ghUhhZUbx`
>XY`@_ca`ch]j`Y`bU\`a`Y]b`:`Y]g`Z0f`g]WXYb`i`bX`Y]ZYfhY`g]WXYb
gdUbbYbXYg`?cdZ]Ub!`?cdZ]FYbbYb"8]Y`8 Ua dZc_ca`ch]j`Yb
gW`cVYb`g]WXY`X]fY`_h`UbY]b`UbXYf`j`cfVY]ž`k`Ug`XYb`:`U\`f[`AghYb`Y]b
i`bj`Yf[`Ygg`]WXYg`9f`YVb]g`Vch`ž`Yf`Ai`hYfhY`x\`bbmi`l`a`Ubb`j`ca
DfYggYhYUa`XYg`A`i`gYi`a`g"

HYW`b]_`YVY`Ub`XYb`:`Y]gYb

8]Y`5bZU\fh`bUW`<Y`hnXcfZ`ž`k`c`g]WXY`XYf`a`U`Yf]gWXY
9]gYbVU\bj`]UXi`_h`VYZ]bXYh`ž`k`Uf`Y]b`k`Y]hYfYg`<][`\`][`\h`<i`bXYfhY
j`cb`:`U\`f[`AghYb`i`bX`6Ygi`WXYf`bi`hnhYb`X]Y`;`Y`Y[`Yb\Y]h`ž`i`a`a`]h
XYb`GcbXYfn0[`Yb`ni`fY]gYb"i`c`hc[`fUZyb`\]Y`hYb`X]Y`gdUbbYbXY
GnYbYf]Y`a`]h`i`bn`A`\`][`Yb`6]`XYfb`ZYgh`9]b][`Y`NY]hnYi`[`Yb`nc[`Yb
5i`Za`Yf_gUa`_Y]h`Ui`Z`g]WXY`ž`U`g`g]Y`Y]bYb`U`hYb`HfUVUb`h`a`]h`C`gh!

?YbbnY]W\Yb`]bg`6]`X`fØW_hyb` `Y]b`bcghU`[]gW\Yf`F`ØW_V`]W_`Ui`Z`
X]Y`XUa`U`][`Yb`J`Yf`_Y`fghU`[`Y`"

9]bY`XYf`VYgcbXYfYb`@_ca`ch]j`Yb`ž`X]Y`VY]`X]YgYa`'9]`Ybh`Y]bY`
F`c`Y`gd]Y`hY`ž`k`Uf`X]Y`@_`)'`\$`'`*`%`*`"'`8]YgY`%-`(`\$`[`YVUi`hY`
A`UgW\]bY`XYf`GW\k`UfnYbVYf[`Yf`9]gYbVU\`bZfYi`bXY`U`h`bUW\`
U\`fY`Ub[`Yb`F`YghUi`f]Yfi`b[`gUfVY]hYb`k`]YXYf`:`U\`fh`Ui`Z[`Ybca`a`Yb`
i`bX`k`Uf`Y]bY`YW\hY`5`hfhU`_h]cb`ZØf`X]Y`6Ygi`W\Yf`"8]Y`nk`Y]hY`@_ž`
,`*`%'`'`'`ž`k`]fX`j`cb`XYf`9]gYbVU\`b!`6Ui`!`i`bX`6Yhf]YVg[`YgY`gW\UZh`
DfYgg]hnhU`VU\`b`Y]b[`YgYhnhž`X]Y`gY]h`&\$\$`YfZc`[`fY]W\`]a`
DYfgcbYb!`i`bX`;`ØhYfj`Yf`_Y`f`h`h]h[`]'gh`"

9]b`k`Y]hYfYf`VYXYi`hYbXYf`6YghUbXhY]`XYg`<Y]n\Ui`gZYghYg`k`Uf`
X]Y`A`Ø[`]W\`_Y]h`ZØf`X]Y`;`ÀghYž`X]Y`8Ua`dZYf`YVb]ggY`XYf`
J`Yf[`Ub[`Yb\`Y]h`\`Ui`hbU\`ni`Yf`YVYb`"K`]f`k`c`Y`b`X]Y`:`Ugn]bUh]cb`
XYf`8Ua`dZc`_`i`bX`XUg`@YVYbg[`YZØ\`XYf`Y\`Ya`U`][`Yb`
9]gYbVU\`bYdcW\Y`k`]YXYf`Ui`ZYVYb`UggYb`ž`a`Y]bhY`i`a`Ubb`i`bX`
i`bhYfghf]W\`X]Y`6YXYi`hi`b[`XYg`:`YghYg`ZØf`9]gYbVU\`bZUbg`i`bX`
;`YgW\]W\hg]bhYfYgg]YfhY`"8]Y`8Ua`dZnØ[`Y`VfUW\hYb`b]W\h`bi`f`
bcghU`[]gW\Yg`:`U]f`a`]hž`gcbXYfb`k`UfYb`Ui`W\`Y]b`NY]W\Yb`ZØf`XUg`
9b[`U[`Ya`Yb`hž`X]Y`hYW\`b]gW\Y`;`YgW\]W\hY`XYf`9]gYbVU\`b`ni`
k`ØfX][`Yb`"

9]b`6`]W_`]b`X]Y`J`Yf[`Ub[`Yb\`Y]h`

8]Y`8Ua`dZc`_ž`X]Y`%-`'`-`j`cb`XYf`@_ca`ch]j`ZUVf`_`K`]Yb`
:`cf]XgXcfZ`dfcXi`n]Yfh`k`i`fXYž`]gh`a`]h`Yfk`Y]`Y`Y]b`ZYghYg`9`Ya`Ybh`
]a`GcbXYfj`Yf`_Y`f`]b`8Yi`hgW\`UbX`"8]YgY`k`]W\h[`Y`A`UgW\]bY`\`Uh`
]\`fYb`D`Uhn`VY]\`]ghcf]gW\Yb`:`U\`fhYb`ž`i`bhYf`UbXYfYa`Ui`Z`XYf`
9fn[`YV]f[`]gW\Yb`5i`gg]W\hgVU\`b`cXYf`Ui`Z`XYb`b`gY`b`F`Ø[`Yb`i`bX`
l`gYXca`ž[`Yž`bXYb`"8]Y`HfUX]h]cb`XYg`8Ua`dZYhf]YVg`k`]fX`
k`Y]hYf\]b`\`cW\`[`Y\`U`hYb`ž`k`Ug`b]W\h`bi`f`ZØf`HYW\`b]`_`YV\`UVYf`j`cb`
6YXYi`hi`b[`]ghž`gcbXYfb`Ui`W\`ZØf`X]Y`9f\`U`hi`b[`Y]bYg`k`]W\h[`Yb`
HY]`g`XYf`XYi`hgW\Yb`J`Yf`_Y`fg[`YgW\]W\hY`"

A`]h`XYf`8i`fW\ZU\`fh`XYf`VY]XYb`8Ua`dZfØggYf`Ua`<`U`hYdi`b`_h`
:`fUb`_YbghY]b`k`i`fXY`X]Y`8mbUa`_]`XYf`J`YfUbghU`hi`b[`VYgcbXYfg`
gdØfVUf`":`Øf`X]Y`6Ygi`W\Yf`k`Uf`Yg`Y]b`i`bj`Yf[`Ygg`]W\Yf`A`ca`Ybhž`

Y]b`YVYbX][Yg`GhØW_ ; YgWk]Wk hY`]b : cfa`XYf`XUa`dZYbXYb
A UgWk]bYb`ni`Yf`YVYb"8i fWk`gc`WkY`9j Ybhg`k`]fX`X]Y
9]gYbVU\`b`i`hi`f`]b`C`ghXYi`hgWk`UbX`YVYbX][`[`Y\`U`hYb`i`bX`X]Y
: Ugn]bUh]cb`ZØf`X]Y`HYWk`b`_][`YgWk]Wk hY`dfcdU[`]Yfh"

≠g[YgUa`h`nY][`h`XUg`<`Y]n\`Ui`gZY`ghž`k`]Y`k`]Wk`h][`X]Y`9f\`U`hi`b`[`j`cb
\`]ghcf]gWk`Yb`J`Yf`_`Y\`fga`]hhY`b`i`bX`XUg`5b[`YV`ch`gc`WkYf`9f`YVb]ggY
ZØf`X]Y ; YgY`gWk`UZh`g]bX"G]Y`V]YhYb`Y]bYb`ZUgn]b]YfYbXYb`9]bV`]W_
]b`X]Y`J`Yf[`Ub[`Yb\`Y]h`XYf`9]gYbVU\`b`i`bX`UggYb`X]Y`<`YfnYb`j`cb
HYWk`b`_`ZUbg`\`Ø\`Yf`gWk`U[`Yb"Gc`WkY`J`YfUbghU`hi`b[`Yb`gd]Y`Yb
Y]bY`Yb`hgWk`Y]XYbXY`F`c`Y`XUVY]ž`XUg`≠`hYfYggY`Ub`XYf
9]gYbVU\`b[`YgWk]Wk hY`YVYbX][`ni`U`hYb`i`bX`Y]bY`bYi`Y
; YbYfUh]cb`ZØf`X]Y`HYWk`b`_`ni`VY[`Y]ghYfb"

8]Y`6YXYi`hi`b`[`j`cb`8Ua`dZ`c`_`ca`ch]j`Yb`]b
XYf`9]gYbVU\`b[`YgWk]Wk hY

8Ua`dZ`c`_`ca`ch]j`Yb`\`UVYb`Y]bY`nYbhfU`Y`F`c`Y`]b`XYf` ; YgWk]Wk hY
XYf`9]gYbVU\`b`i`bX`XYf`≠`Xi`ghf]Y`]a`5`[`Ya`Y]bYb`[`Ygd]Y`h"G]Y
fYj`c`i`h]cb]YfhYb`XYb`HfUb`gdc`fh]j`cb`DYfg`cbYb`i`bX` ; ØhYfb`]a`%-`
≠\`f\`i`bXYf`hž`k`Ug`Yf\`YV`]Wk`Y`5i`gk`]f`_`i`b[`Yb`Ui`Z`X]Y`K`]fhgWk`UZh
i`bX`X]Y ; YgY`gWk`UZh`\`UhhY"8]Y`9fZ]bXi`b[`XYf`8Ua`dZ`c`_
Yfa`Ø[`\`]Wk`hY`gWk`bY`YfY`F`Y]gYb`i`bX`YZZ]n]YbhY`@]YZf`_`YhhYb`i`bX
hfi`[`gc`ni`a`K`UWk`ghi`a`j`cb`Gh`X`hYb`i`bX`≠`Xi`ghf]YfY[`]cbYb`VY]"`

≠`8Yi`hgWk`UbX`k`i`fXY`X]Y`YfghY`8Ua`dZ`c`_`%`,`)`Ui`Z`XYf`GhfY`W`Y
nk`]gWk`Yb`B`Øfb`VYf[`]i`bX` : Øfh\`Y]b[`YgY`hnh"8]YgY`VU\`b`VfY`Wk`Yb`XY
HYWk`bc`c[`]Y`Yb`hk`]W`Y`hY`g]Wk`f`UgWk`k`Y]hYf`i`bX`ZØ\`fhY`V]g`ni`f
A`]hhY`XYg`&\$"≠\`f\`i`bXYf`hg`ni`Y]bYa`Z`Å`Wk`Yb`XYW`Yb`XYb`B`Y`hn`j`cb
9]gYbVU\`b]YfV]bXi`b[`Yb"8Ua`dZ`c`_`ca`ch]j`Yb`g]bX`Y]b`Gma`Vc`ZØf
≠bcj`Uh]cb`i`bX`hYWk`b]gWk`Y` : cfhgWk`f]hhY`YbYf`NY]h"<`Yi`hY`k`YfXYb
g]Y`c`Zi]b`A`i`gY`Yb`i`bX`VY]gdYn]Y`Yb`9j`Ybhg`k`]Y`XYa
<`Y]n\`Ui`gZY`gh[`]ZY]Yfhž`k`cXi`fWk`XYf`\`]ghcf]gWk`Y`K`Yfh`i`bX`XUg
hYWk`b]gWk`Y`9fVY`[`Yk`ØfX][`h`k`YfXYb"

5`_`hi`Y`Y`9b`hk`]W`_`i`b[`Yb`]a`6YfY]Wk`XYf
\`]ghcf]gWk`Yb`9]gYbVU\`bYb

⊕XYb`YhnhYb`⊕\fYb`UVYb`g]W`nU`fY]W`Y`⊕]h]Uh]j`Yb`[`YV]`XYhž
i`a`X]Y`\]ghcf]gW`Y`9]gYbVU`b`_i`hi`f`ni`VYk`U`fYb`"<]ghcf]gW`Y`
9]gYbVU`b`Ybž`k`jY`X]Y`DfYgg]hnhU`VU`b`i`bX`X]Y`8Yi`hgW`Y`b
6i`bXYgVU`b`ž`cf[`Ub]g]YfYb`fY[`Y`a`À»][`:`U`fhYb`a`]h
8Ua`dZc`_ca`ch]j`Yb`i`bX`Yfn]Y`Yb`XUa`]h`Y]bY`\c`Y
6Ygi`W`YfUb`nU`\`"8]YgY`J`YfUb`ghU`hi`b[`Yb`g]bX`b]W`h`bi`f`Z0f
9]gYbVU`b`ZUbg`j`cb`[`fc»Ya``⊕hYfYggYž`gcbXYfb`Ui`W`Z0f`:`Ua`]Yb
i`bX`]bhYfYgg]YfhY`@U]Ybž`X]Y`X]Y`:`Ugn]bUh]cb`XYf`8Ua`dZhYW`b]_`
\Ui`hbU`\Yf`YVYb`a`ÒW`hYb`"

8]Y`6YXYi`hi`b[`gc`W`Yf`9fY][`b]ggY`nY][`h]g]W`Ui`W`]b`ghY][`YbXYb
6Ygi`W`YfnU`\Yb`"Ni`a`<Y]n`Ui`gZgh]b`<]`VYfgXcfZ`_ca`a`Yb`⊕\f
Z0f`⊕\f`<i`bXYfhY`j`cb`⊕hYfYgg]YfhYbž`X]Y`X]Y`bcghU`[`]gW`Y`
5ha`cgd`\ÁfY`i`bX`X]Y`HYW`b]_j`Yf[`Ub[`YbYf`NY]hYb`gW`ÀhnYb`"
8]YgY`J`YfUb`ghU`hi`b[`Yb`V]YhYb`ni`XYa`Y]bY`D`UhhZc`fa`Z0f`XYb
5i`ghUi`gW`nk`]gW`Yb`@YV`UVYfb`i`bX`:`UW`Yi`hYbž`X]Y`]fY
9fZU`fi`b[`Yb`i`bX`?Yb`hb]ggY`hY`]Yb`"

J`Y`fa`Uf`_hi`b[`i`bX`Hci`f]ga`i`g`]b`XYf` F`Y[`]cbYb`

8Yf`Hci`f]ga`i`g`]b`gh`Xh]gW`Yb`i`bX``ÀbX`]W`Yb`F`Y[`]cbYb`d`fcZ]h]Yfh
Yf`\YV`]W`]j`cb`9]gYbVU`b`ZYghYb`i`bX`À`b`]W`Yb`J`YfUb`ghU`hi`b[`Yb`"
8]Y`J`Yf`_b0dZi`b[`]j`cb`\]ghcf]gW`Ya``9fVY`i`bX`a`cXYfbYb
:`fY]nY]hU`_hj`]h`hYb`n]Y`\h`nU`\fY]W`Y`6Ygi`W`Yf`Ub`ž`X]Y`b]W`h`bi`f`X]Y
8Ua`dZc`_ca`ch]j`Ybž`gcbXYfb`Ui`W`X]Y`i`a`]Y[`YbXYb`5hfhU`_h]cbYb
Yf`_i`bXYb`a`ÒW`hYb`"Gh`XhY`k`jY`7`Ya`b]h`i`bX`]fY`I`a`[`YVi`b[
g]bX`XUVY]`ni`bY`a`YbX`j`cb`X]YgYf`9b`hk`]W`_i`b[`VYhfc`ZYbž`XU`g]Y
j`Yfgi`W`Ybž`]fYb`\]ghcf]gW`Yb`F`Y]W`hi`a`a`]h`hci`f]gh]gW`Yb
5b[`YV`chYb`ni`_ca`V]b]YfYb`"

8]Y`Ni`gUa`a`YbUfVY]h`nk`]gW`Yb`j`YfgW`]YXYbYb`hci`f]gh]gW`Yb
5_hYi`fYbž`k`jY`A`i`gYYbž`J`Yf`_Y`fgi`bhYfbY`a`Yb`i`bX`XYf
GhUXhYb`hk`]W`_i`b[`ž]gh`i`bYf`Àgg`]W`ž`i`a`Y]b`Ub`gd`fi`W`gj`c`Y`g
9f`YVb]g`ni`[`YghU`hYb`"BYVYb`XYf`J`Yfa`Uf`_hi`b[`XYf`
9]gYbVU`b`ZYghY`k`YfXYb`Ui`W`:`U`fhYb`]b`a`U`Yf]gW`Y`F`Y[`]cbYb
VYk`c`fVYbž`X]Y`5b`Y[`Yfb`i`bX`6Ygi`W`Yfb`Y]bY`W`Ufa`Ub`hY`F`Y]gY`]b`

X]Y`J Yf[Ub[Yb\Y]h`Yfa Ò[`]W\Yb"Gc`W\Y`A U» bU\`a Yb`hfU[Yb`XUni
VY]ž`c_U`Y`K]fhgW\UZhYb`ni`gh`f_Yb`i bX`XUg`_i`hi fY``Y`9fVY`Y]bYg
; YV]Yhg`ni`ZÖfXYfb"

8YhU]`g

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